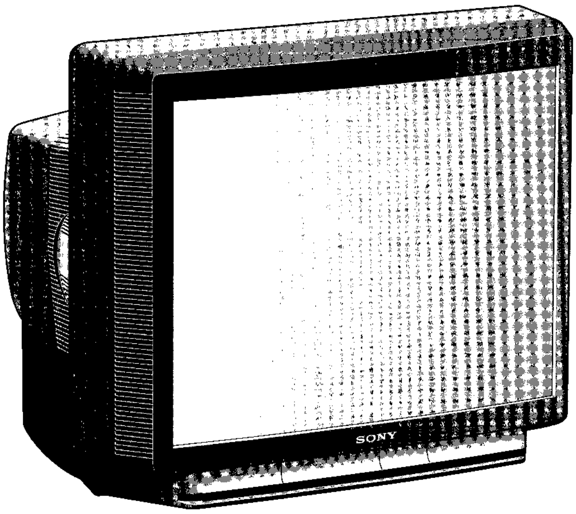
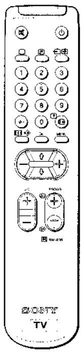
SERVICE MANUAL

BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-29X1A	RM-839	Italian	SCC-K05H-A
KV-29X1B	RM-839	French	SCC-K01H-A
KV-29X1D	RM-839	AEP	SCC-K07H-A
KV-29X1E	RM-839	Spanish	SCC-K06H-A
KV-29X1K	RM-839	OIRT	SCC-K08Q-A
KV-29X1L	RM-839	Irish	SCC-J21B-A
KV-29X1R	RM-839	OIRT	SCC-K08R-A
KV-29X1U	RM-839	UK	SCC-K04F-A





MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20, A-H, H1,H2 UHF: E21-E69	PAL NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	29X1A	29X1B	29X1D	29X1E	29X1K 29X1R	29X1L 29X1U
Power Consumption	87W	101W	101W	101W	101W	149W

SPECIFICATIONS

Picture Tube	Super Trinitron Approx. 72 cm (29 inches) (Approx. 68 cm picture measured diagonally) 110° -deflection

Rear/Front Terminals

[REAR]

→⊡ 1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB
- Outputs for TV audio and video signals

⊡→ 2/→Ⓢ 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)

[FRONT]

→▢ 3 , Video input - phono jack
→⊙ 3 , Audio inputs - phono jacks
→Ⓢ 3 , S video input - 4 pin DIN
∩ Stereo minijack - headphone jack

Sound output	
Left/Right	2x10W (RMS) 2x20W (music power)
Dimensions	676x557x528 mm approx.
Weight	Approx. 43.0 kg
Supplied accessories	RM-839 Remote Commander (1) Batteries R6 (2)
Other features	Fastext, TOPTEXT

[RM-839]

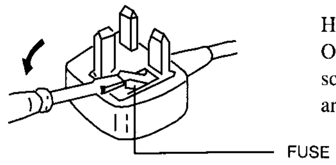
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including battery)

Design and specifications are subject to change without notice.

Model name Item	KV-29X1A	KV-29X1B	KV-29X1D	KV-29X1E	KV-29X1K KV-29X1R	KV-29X1L KV-29X1U
PIP	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON	ON
VM Set	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	OFF	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

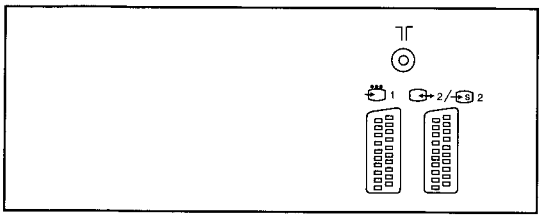
WARNING (KV-29X1L/29X1U only)

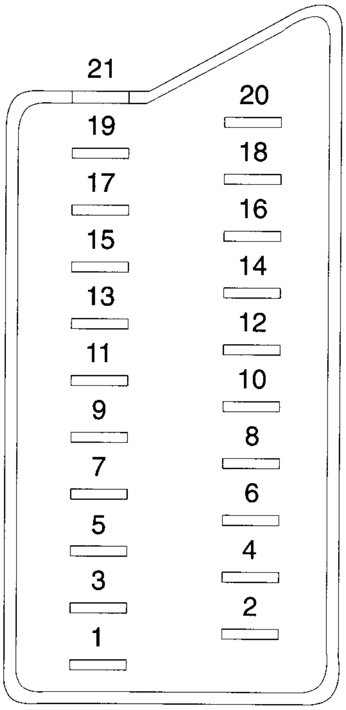
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ◈ mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (⇥1, ⇆ 2 / ⇥S 2)

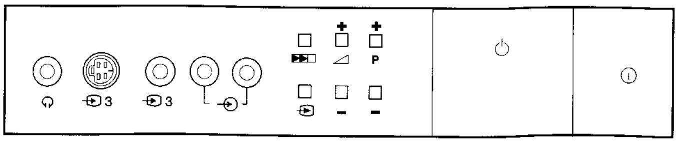




Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	–	–	Red input	0.7 ± 3dB, 75 ohms, positive
	–	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	–	–	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	–	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING!!

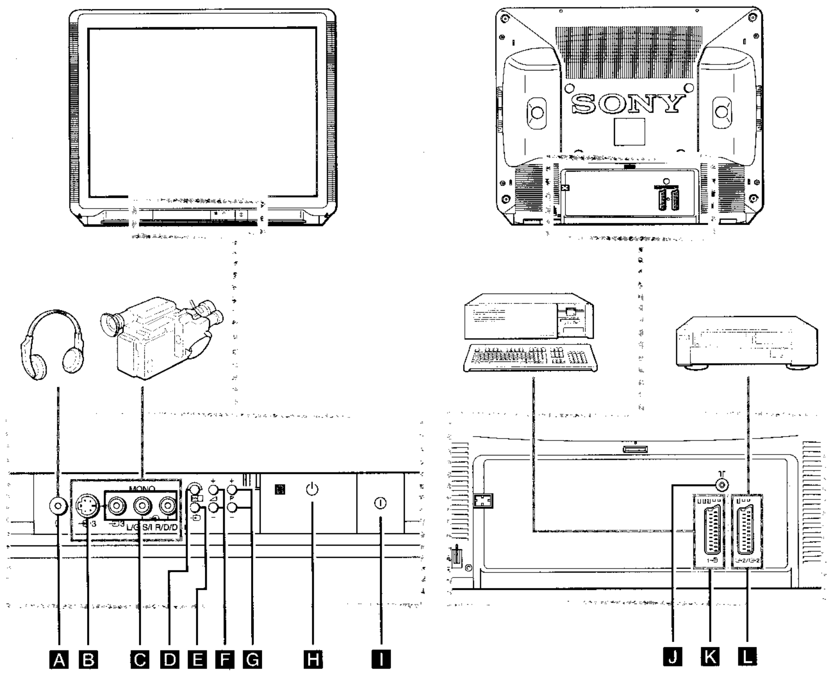
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.


SONY
MONO
L/G S/I R/D/D
A
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C
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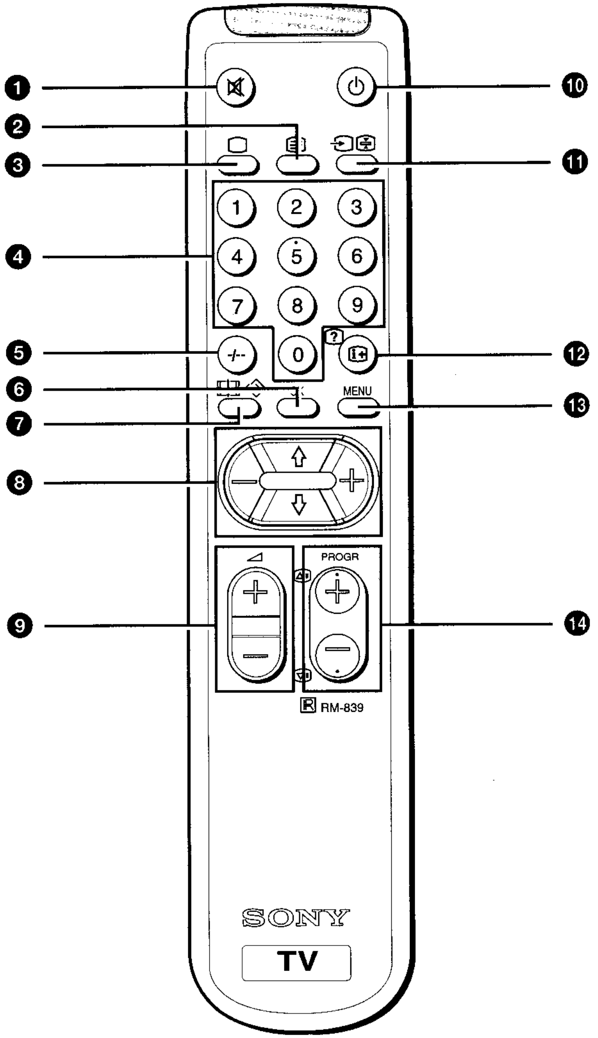
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1
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3
4
5
6
7
8
9
0
-/--
MENU
PROGR
RM-839
SONY
TV

Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

TV buttons and Terminals

Reference and Symbol	Name	Refer to Page
Front of the set		
🅰 ∩	Headphones jack	4
🅱 ⇥Ⓢ 3	S video input jack	29
🅲 ⇥ 3, ⇥ 3	Audio/video input jacks	29
🅳 ▶▶☐	Automatic Preset button	11
🅴 ⇥	Input mode button	13
🅵 ◿ +/-	Volume control	12
🅶 P +/-	Programme button	12
🅷 ⏻	Standby mode indicator	12
🅸 ⓘ	Main power switch	12
Rear of the set		
🅹 ⊤⊤	Aerial socket	10
🅺 ⇥ 1	21 pin Euro connector	29
🅻 ⇥2/⇥Ⓢ 2	21 pin Euro connector	29

Remote Commander Operation

Reference and Symbol	Name	Refer to Page
❶ 🔇	Muting on/off button	12
❷ ⊜	Teletext button	13
❸ ▢	TV power on/TV mode button	12, 13
❹ 1, 2, ... 9, 0	Number buttons	12
❺ - / - -	Double digit entering button	12
❻ OK	OK (Confirmation) button	14
❼ ⊞ / ⇔	Screen format button Teletext: Favourite pages button	12, 28
❽	Menu control	14
❾ ◿ +/-	Volume control button	12
❿ ⏻	Standby button	12
⓫ ⇥/⊕	Input mode button Teletext: Freezing the subpage	13, 27
⓬ ⓘ/?	On-screen display button Teletext: reveal button	12, 27
⓭ MENU	Menu on/off button	14
⓮ PROGR +/-	Programme buttons Teletext: Page up/page down buttons	12, 13

Step 1

Connecting the Aerial

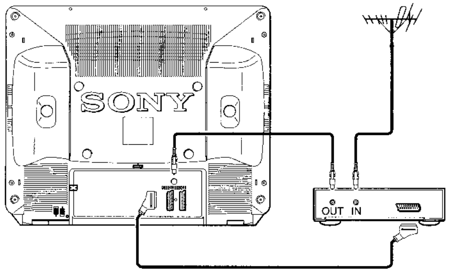
(If you connect a VCR, skip to step 2)

Insert the aerial plug tightly into the aerial socket ⌉⌈ **J**. Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 2

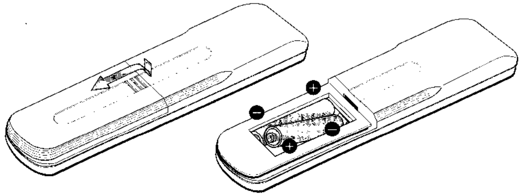
Connecting a VCR

We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 16.
See "Connecting Optional Equipment" on page 29 for more information.



Step 3

Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

Step 4

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.
If you prefer manual presetting, refer to "Presetting Channels Manually" on page 16.

1 Plug into mains.
Press the power switch ① **I** on the TV set.

2 Press and hold the button ⏩ **D** on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

Note: Channels are automatically stored as follows;

KV-25X1U/29X1U	KV-25X1L/29X1L
Programme 1 BBC1 Programme 2 BBC2 Programme 3 ITV Programme 4 CH4 or S4C	Programme 1 RTE1 Programme 2 RTE2 Programme 3 BBC1 Programme 4 BBC2 Programme 5 ITV Programme 6 CH4 or S4C

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

TV Operation

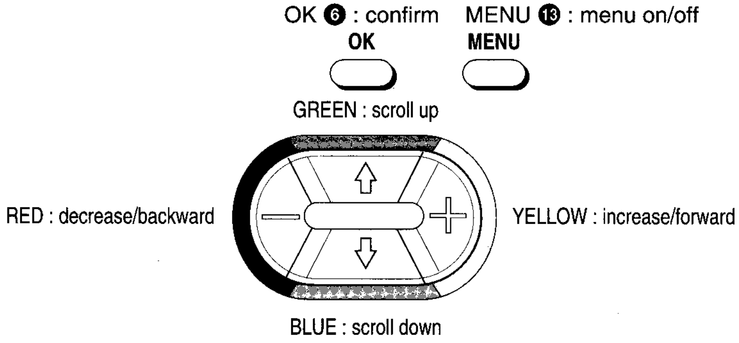
To	Press
Switch on	⏻ I on TV
Switch off temporarily	⏻ ❿ TV is now in standby mode and ⏻ H indicator on TV lights up.
Switch on from standby mode	□ ❸, PROGR +/- ⓮ G or any number button ❹.
Switch off completely	⏻ I on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	PROGR +/- ⓮ G or number buttons ❹ For double digit number, press -/-- ❺ then the number e.g. For 23, press -/-- ❺ then 2 and 3.
Display on screen indications	ⓘ ⓬. Press again to make the indications disappear.
Adjust the volume	◢ + or - ❾ F
Mute the sound	🔇 ❶. Press again to restore the sound.
View programmes in 16:9 mode	⊞ ❼. Press again to return to 4:3 mode.

TV Operation (continued)

To	Press
View video input picture (see page 30 for detailed information)	⇥ ⓫ E repeatedly until the desired video input appears. Press □ ❸ to restore the TV picture.
View teletext (see page 27 for detailed information)	
Switch on	⊜ ❷
Select a page	three number buttons ❹ or ≡▲ ⓮ (for next page) or ≡▼ ⓮ (for previous page).
Use fastext	Blue, Green, Red or Yellow ❽.
Switch off	□ ❸

Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:

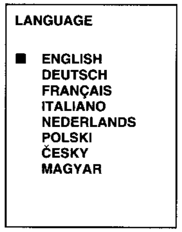


Choosing the Menu Language

This function enables you to change the language of the menu screens.

1 Press power switch ① **I** on the TV. If the standby indicator ⏻ **H** on the TV is lit, press ▢ ❸ or a number button ❹ on the Remote Commander.

2 Press the MENU button ⓭ on the remote commander.



LANGUAGE

- ■ ENGLISH
- DEUTSCH
- FRANÇAIS
- ITALIANO
- NEDERLANDS
- POLSKI
- ČESKY
- MAGYAR

3 Press blue or green ❽ to select the language you want then press yellow ❽.

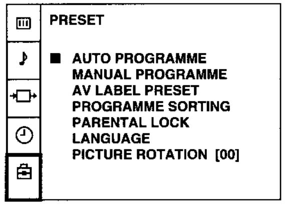
4 Press the MENU button ⓭ to restore the normal TV picture.

Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 11. You can also preset channels automatically by using the remote commander as follows:

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🖨 on the menu screen then press yellow ❽.



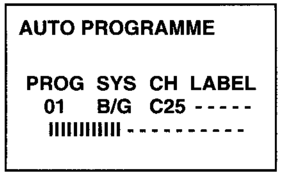
PRESET

- ■ AUTO PROGRAMME
- MANUAL PROGRAMME
- AV LABEL PRESET
- PROGRAMME SORTING
- PARENTAL LOCK
- LANGUAGE
- PICTURE ROTATION [00]

3 Press blue or green ❽ to select 'AUTO PROGRAMME'.

4 Press and hold yellow ❽ until the automatic menu is displayed and the search starts.

After all available channels have been preset, the normal TV picture is shown.



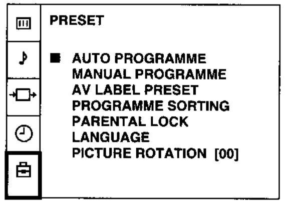
```
AUTO PROGRAMME

PROG SYS CH  LABEL
 01  B/G C25 -----
 IIIIIIIIII ----------
```

Presetting Channels Manually

This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

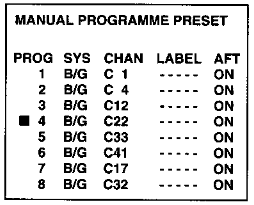
1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol ⊟ on the menu screen then press yellow ❽.


PRESET

- ■ AUTO PROGRAMME
- MANUAL PROGRAMME
- AV LABEL PRESET
- PROGRAMME SORTING
- PARENTAL LOCK
- LANGUAGE
- PICTURE ROTATION [00]

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.


MANUAL PROGRAMME PRESET

	PROG	SYS	CHAN	LABEL	AFT
	1	B/G	C 1	-----	ON
	2	B/G	C 4	-----	ON
	3	B/G	C12	-----	ON
■	4	B/G	C22	-----	ON
	5	B/G	C33	-----	ON
	6	B/G	C41	-----	ON
	7	B/G	C17	-----	ON
	8	B/G	C32	-----	ON

4 Press blue or green ❽ to select on which programme number you want to preset a channel then press yellow ❽.

5 Press blue or green ❽ to select the TV broadcast system 'I' or a video input source (AV1,AV2 ...) then press yellow ❽.

6 **(This step 6 is only for KV-25X1L/29X1L)**
Press blue or green ❽ to select 'C' (for terrestrial channels) or 'S' (for cable channels) then press yellow ❽.

7 Select the first number digit of 'CHAN' then the second number digit of 'CHAN' with the number buttons ❹ on the remote commander
or
Press blue or green ❽ to search for the next available channel number.

8 If you want to store the channel number, go to step 9. If not, select a new channel number using the number buttons ❹ on the remote commander or press blue or green ❽ to resume the search.

9 Press OK ❻.

10 Repeat steps 4 to 9 to preset other channels.

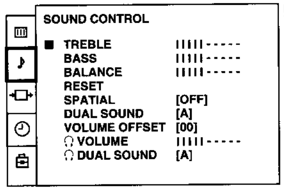
11 Press the MENU button ⓭ to restore the normal TV picture.

Adjusting the Picture and Sound

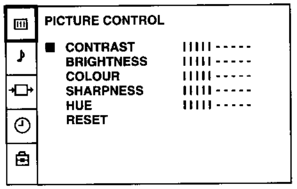
Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select ▥ for picture control or ♪ for sound control then press yellow ❽.



SOUND CONTROL
- ■ TREBLE IIIII-----
- BASS IIIII-----
- BALANCE IIIII-----
- RESET
- SPATIAL [OFF]
- DUAL SOUND [A]
- VOLUME OFFSET [00]
- ∩ VOLUME IIIII-----
- ∩ DUAL SOUND [A]



PICTURE CONTROL
- ■ CONTRAST IIIII-----
- BRIGHTNESS IIIII-----
- COLOUR IIIII-----
- SHARPNESS IIIII-----
- HUE IIIII-----
- RESET

3 Press blue or green ❽ to select the desired item then press yellow ❽.

4 Press red or yellow ❽ to alter the item then press OK ❻.
For the effect of each control, see the following tables.

5 Repeat steps 3 and 4 to adjust the other items.

6 Press the MENU button ⓭ to restore the normal TV picture.

PICTURE CONTROL	Effect
Contrast	Lower —— I —— Higher
Brightness	Darker —— I —— Brighter
Colour	Less —— I —— More
Sharpness	Softer —— I —— Sharper
Hue	Greenish —— I —— Reddish (NTSC signals only)
Reset	Resets picture to the factory preset levels.

Adjusting the Picture and Sound (continued)

SOUND CONTROL	Effect
Treble	Less —— I —— More
Bass	Less —— I —— More
Balance	Left —— I —— Right
Reset	Resets sound to the factory preset levels.
Spatial	Acoustic sound effect.
Dual Sound	A: Left channel —> B: Right channel —> stereo —> mono
Volume Offset	Presets the volume level for individual programmes. -12 —— 0 —— +12
∩ Volume	Adjusts the headphone volume.
∩ Dual Sound	Presets the headphone channels. A: Left channel —> B: Right channel —> stereo —> mono

Manual Fine-Tuning

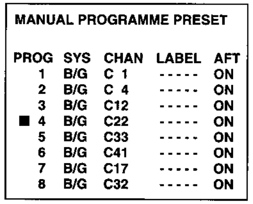
Normally, the automatic fine-tuning (AFT) function is operating.

If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol ⊟ on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.



MANUAL PROGRAMME PRESET

PROG	SYS	CHAN	LABEL	AFT
1	B/G	C 1	-----	ON
2	B/G	C 4	-----	ON
3	B/G	C12	-----	ON
■ 4	B/G	C22	-----	ON
5	B/G	C33	-----	ON
6	B/G	C41	-----	ON
7	B/G	C17	-----	ON
8	B/G	C32	-----	ON

4 Press blue or green ❽ to select the programme number which corresponds to the channel you want to manually fine-tune.

5 Press yellow ❽ repeatedly until the AFT position changes colour..

6 Press blue or green ❽ to change the frequency of the channel from -15 to +15.

7 Press OK ❻.

8 Repeat steps 4 to 7 to fine-tune other channels.

9 Press the MENU button ⓭ to restore the normal TV picture.

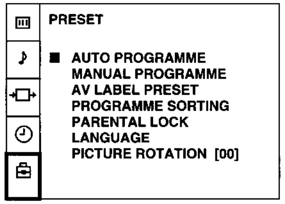
Sorting Programme Positions

This function enables you to move channels to different programme numbers.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol ⊟ on the menu screen then press yellow ❽.

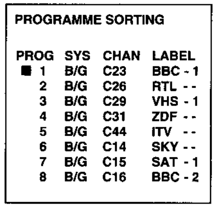
3 Press blue or green ❽ to select 'PROGRAMME SORTING' then press yellow ❽.



PRESET

- ■ AUTO PROGRAMME
- MANUAL PROGRAMME
- AV LABEL PRESET
- PROGRAMME SORTING
- PARENTAL LOCK
- LANGUAGE
- PICTURE ROTATION [00]

4 Press blue or green ❽ to select the channel you want to move to another programme number then press yellow ❽.



PROGRAMME SORTING

PROG	SYS	CHAN	LABEL
■ 1	B/G	C23	BBC - 1
2	B/G	C26	RTL - -
3	B/G	C29	VHS - 1
4	B/G	C31	ZDF - -
5	B/G	C44	ITV - -
6	B/G	C14	SKY - -
7	B/G	C15	SAT - 1
8	B/G	C16	BBC - 2

5 Press blue or green ❽ to select the programme number to which you want to move the channel selected in step 4 then press yellow ❽.

6 Repeat steps 4 to 5 if you wish to move other channels to different programme numbers.

7 Press the MENU button ⓭ to restore the normal TV picture.

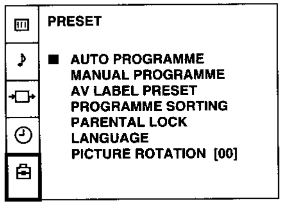
Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

1 Press the MENU button ⑬.

2 Press blue or green ⑧ to select the symbol ⊟ on the menu screen then press yellow ⑧.

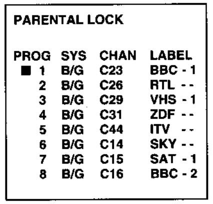
3 Press blue or green ⑧ to select 'PARENTAL LOCK' then press yellow ⑧.



PRESET

- ■ AUTO PROGRAMME
- MANUAL PROGRAMME
- AV LABEL PRESET
- PROGRAMME SORTING
- PARENTAL LOCK
- LANGUAGE
- PICTURE ROTATION [00]

4 Press blue or green ⑧ to select the channel you want to block then press yellow ⑧.
The symbol appears before the programme number to indicate that this channel is now blocked.



PARENTAL LOCK

PROG	SYS	CHAN	LABEL
■ 1	B/G	C23	BBC - 1
2	B/G	C26	RTL - -
3	B/G	C29	VHS - 1
4	B/G	C31	ZDF - -
5	B/G	C44	ITV - -
6	B/G	C14	SKY - -
7	B/G	C15	SAT - 1
8	B/G	C16	BBC - 2

5 Repeat step 4 if you wish to block other channels.

6 Press the MENU button ⑬ to restore the normal TV picture.

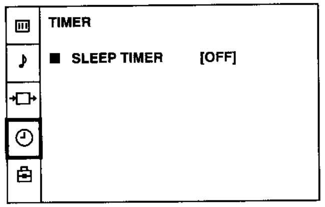
Note: To unblock, press yellow ⑧ after selecting the channel to unblock in the 'PARENTAL LOCK' menu.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

1 Press the MENU button ⑬.

2 Press blue or green ⑧ to select the symbol ◷ on the menu screen then press yellow ⑧.



TIMER

■ SLEEP TIMER [OFF]

3 Press yellow ⑧.

4 Press red or yellow ⑧ to set time delay and press OK ⑥.

OFF 0:30 1:00 1:30 .... 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

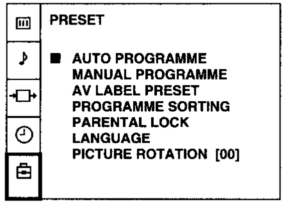
5 Press the MENU button ⑬ to restore the normal TV picture.

Adjusting the Picture Rotation

If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

1 Press the MENU button ⑬.

2 Press blue or green ⑧ to select the symbol ⊟ on the menu screen then press yellow ⑧.


PRESET
- AUTO PROGRAMME
MANUAL PROGRAMME
AV LABEL PRESET
PROGRAMME SORTING
PARENTAL LOCK
LANGUAGE
PICTURE ROTATION [00]

3 Press blue or green ⑧ to select 'PICTURE ROTATION' then press yellow ⑧.

4 Press red or yellow ⑧ to adjust the picture rotation then press OK ⑥. The adjusting range is -5 to +5.

5 Press the MENU button ⑬ to restore the normal TV picture.

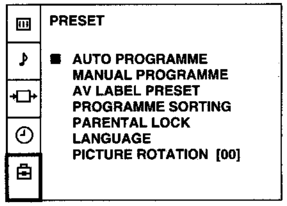
Skipping Programme Positions

This function enables you to skip unused channels when selecting programme numbers with the PROGR+/- buttons. However, you can still watch the skipped channel(s) by using the number buttons.

1 Press the MENU button ⑬.

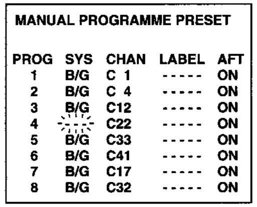
2 Press blue or green ⑧ to select the symbol ⊟ on the menu screen then press yellow ⑧.

3 Press blue or green ⑧ to select 'MANUAL PROGRAMME' then press yellow ⑧.


PRESET
- AUTO PROGRAMME
MANUAL PROGRAMME
AV LABEL PRESET
PROGRAMME SORTING
PARENTAL LOCK
LANGUAGE
PICTURE ROTATION [00]

4 Press blue or green ⑧ to select the channel you want to skip then press yellow ⑧.

5 Press blue or green ⑧ until '- - -' appears in the 'SYS' position.


MANUAL PROGRAMME PRESET

PROG	SYS	CHAN	LABEL	AFT
1	B/G	C 1	-----	ON
2	B/G	C 4	-----	ON
3	B/G	C12	-----	ON
4	- - -	C22	-----	ON
5	B/G	C33	-----	ON
6	B/G	C41	-----	ON
7	B/G	C17	-----	ON
8	B/G	C32	-----	ON

6 Press OK ⑥.

7 Repeat steps 4 to 6 to skip other channels.

8 Press the MENU button ⑬ to restore the normal TV picture.

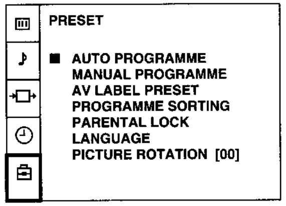
Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

1 Press the MENU button ⑬.

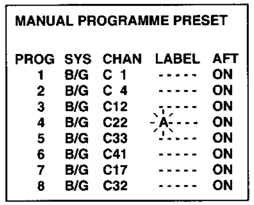
2 Press blue or green ⑧ to select the symbol ⊟ on the menu screen then press yellow ⑧.

3 Press blue or green ⑧ to select 'MANUAL PROGRAMME' then press yellow ⑧.


PRESET
■ AUTO PROGRAMME
MANUAL PROGRAMME
AV LABEL PRESET
PROGRAMME SORTING
PARENTAL LOCK
LANGUAGE
PICTURE ROTATION [00]

4 Press blue or green ⑧ to select the channel you wish to caption then press yellow ⑧ repeatedly until the first element of the 'LABEL' position is highlighted.

5 Press ⑧ blue or green to select a letter or number and press yellow ⑧ (select '-' for a blank). Select other characters in the same way.


MANUAL PROGRAMME PRESET

PROG	SYS	CHAN	LABEL	AFT
1	B/G	C 1	-----	ON
2	B/G	C 4	-----	ON
3	B/G	C12	-----	ON
4	B/G	C22	-A---	ON
5	B/G	C33	-----	ON
6	B/G	C41	-----	ON
7	B/G	C17	-----	ON
8	B/G	C32	-----	ON

6 After selecting all the characters, press OK ⑥.

7 Repeat steps 4 to 6 to caption names for other channels.

8 Press the MENU button ⑬ to restore the normal TV screen.

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.
Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

Switching Teletext On and Off

1 Select the channel which carries the teletext service you wish to view.

2 Press ⊜ ② to display teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons ④.
The page counter searches for the page and after some seconds the page is displayed.

4 Press ☐ ③ to return to the normal TV picture.

Using Other Teletext Functions

To	Press
Access the next or preceding teletext page	≡▲ ⑭ for the next page or ≡▼ ⑭ for the preceding page
Mix the mode	⊜ ② when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	⊞ ⑪. Press once again to cancel.
Reveal hidden information (eg: answers to a quiz)	(?) ⑫. Press once again to cancel.

Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Use the number buttons ❹ to select the page you would like to store.

2 Press ⇔ ❼ twice.
The colour prompts at the bottom of the screen flash.

3 Press red, green, blue or yellow to store the selected page.
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

Displaying the Favourite Pages

1 Press ⇔ ❼.

2 Press blue, green, red or yellow to select the desired page.

Make sure you press ⇔ ❼, otherwise the normal Fastext facility operates.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke . When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue colours on the Remote Commander.

Press the Remote Commander colour button that corresponds to the colour-coded menu. The selected page is displayed after some seconds.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
⇥ 3, ⇥ 3 **B** ⇥ 3 **C**	Normal audio/video and S video	No output
⇥ 1 **K**	Normal audio/video and RGB	Audio/video from TV tuner
⇤ 2/⇤ 2 **L**	Normal audio/video and S video	Audio/video from selected source

About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Notes on connections:

If the picture or sound is distorted, move the VCR away from the TV.

When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

Selecting Input and Output Signals

This section explains how to select the output signal from ⇨ 2/⇨ 2 L and how to select and view the input. You can use direct access buttons ⇥ ⑪ E to select the input or the menu system to select input and output.

Selecting With Direct Access Buttons

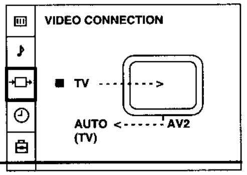
Press ⇥ ⑪ E repeatedly.
Press ▢ ③ to restore the normal TV picture.

Symbol on the screen	Input Signal
⇥ 1	Audio/video through Euro AV connector K
⇥	RGB through Euro AV connector K
⇥ 2	Audio/video through Euro AV connector L
⇥S 2	S video through Euro AV connector L
⇥ 3	Audio/video through the phono jacks C
⇥S 3	S video through the phono jacks B

Selecting With the Video Connection Menu

1 Press the MENU button ⑬.

2 Press blue or green ⑧ to select →□→ for "VIDEO CONNECTION" then press yellow ⑧.


VIDEO CONNECTION

■ TV ---------->

AUTO <------ AV2
(TV)

3 Press blue or green to select input or output then press yellow ⑧.

4 Press blue or green repeatedly to select the desired input or output source then press OK ⑥.

5 Press the MENU button ⑬ to restore the normal TV picture.

Note: If you select 'AUTO' for output, the output source automatically becomes the same as the desired input source.

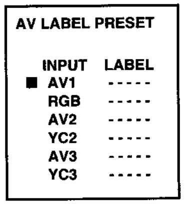
Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

1 Press the MENU button ⑬.

2 Press blue or green ⑧ to select the symbol ⊟ on the screen then press yellow ⑧.

3 Press blue or green ⑧ to select 'AV LABEL PRESET' then press yellow ⑧.


AV LABEL PRESET

INPUT	LABEL
■ AV1	-----
RGB	-----
AV2	-----
YC2	-----
AV3	-----
YC3	-----

4 Press blue or green ⑧ to select the desired input source then press yellow ⑧.

5 Press blue or green ⑧ to select a letter or number then press yellow ⑧ (select '-' for a blank).
Select other characters in the same way.

6 After selecting all the characters, press OK ⑥.

7 Repeat steps 4 to 6 to label other input sources.

8 Press the MENU button ⑬ to restore the normal TV screen.

Troubleshooting

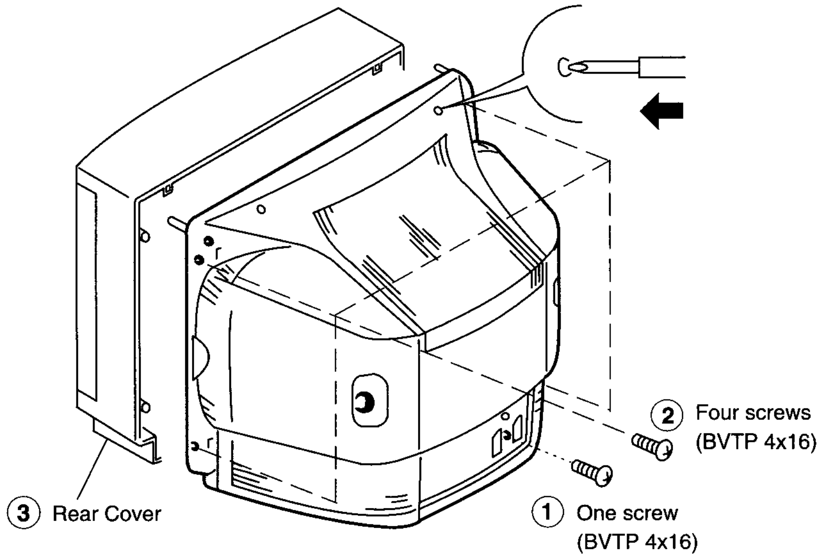
Here are some simple solutions to the problems which affect the picture and sound.

Problem	**Solution**
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ **I** on the TV. (If ⏻ indicator **H** is on, press ▢ ❸ or a programme number ❹ on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds then turn it on again using ⏻ **I**.
Poor or no picture (screen is dark), but good sound	• Press MENU ⓭ to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.
Poor picture quality when watching an RGB video source.	• Press ⇥ ⓫ **E** repeatedly to select ⇥.
Good picture but no sound	• Press ◿ + ❾ **F**. • If 🔇 is displayed on the screen, press 🔇 ❶.
No colour for colour programmes	• Press MENU ⓭ to enter the 'PICTURE CONTROL' menu, select 'Reset' then press OK ❻.
Remote Commander does not function.	• Replace the batteries.

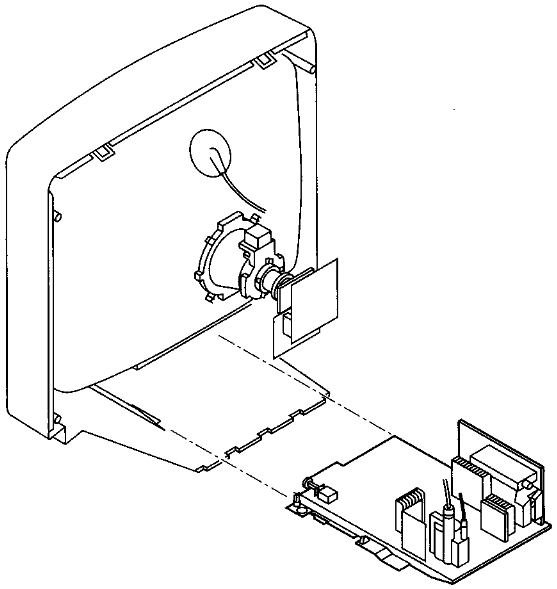
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2
DISASSEMBLY

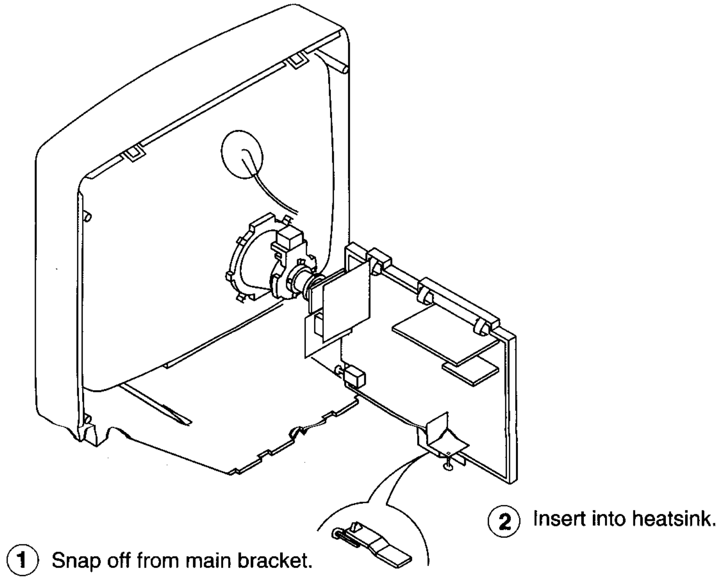
2-1. REAR COVER REMOVAL


② Four screws
(BVTP 4x16)
③ Rear Cover
① One screw
(BVTP 4x16)

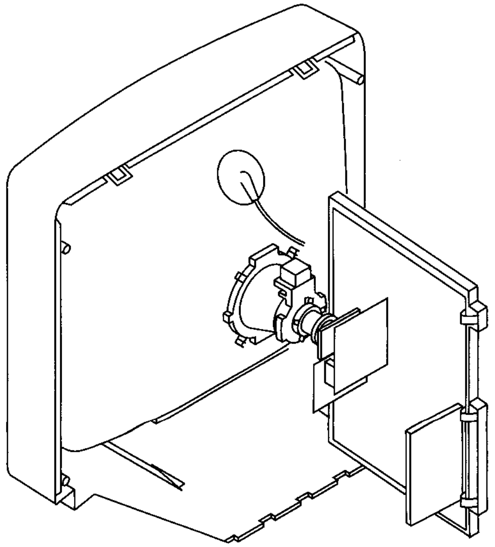
2-2. CHASSIS ASSY REMOVAL



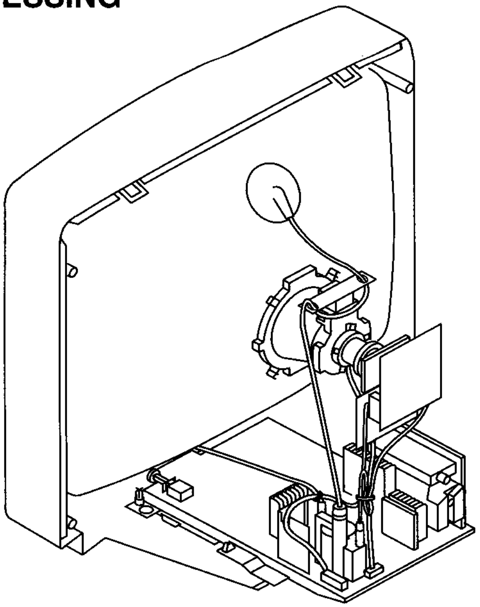
2-3-1. SERVICE POSITION (1)


② Insert into heatsink.
① Snap off from main bracket.

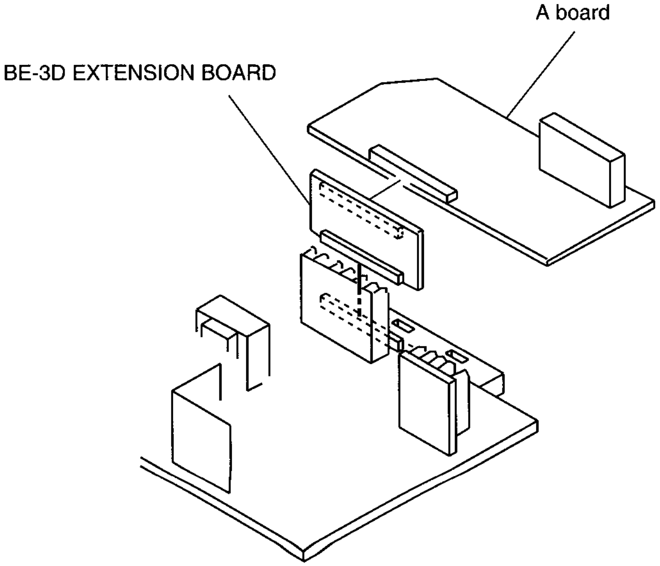
2-3-2. SERIVCE POSITION (2)


Clip bracket into Beznet.

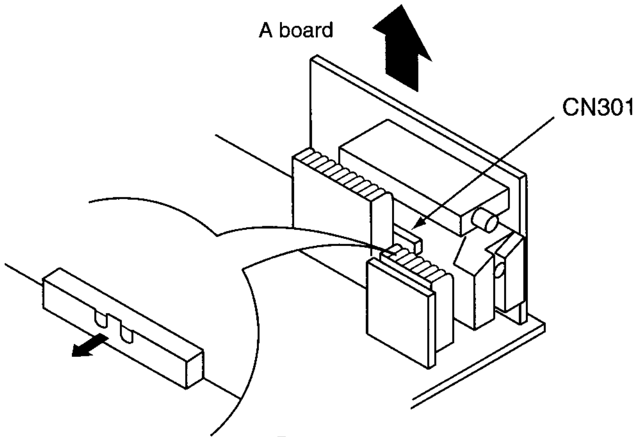
2-4. WIRE DRESSING



2-6. EXTENSION BOARD

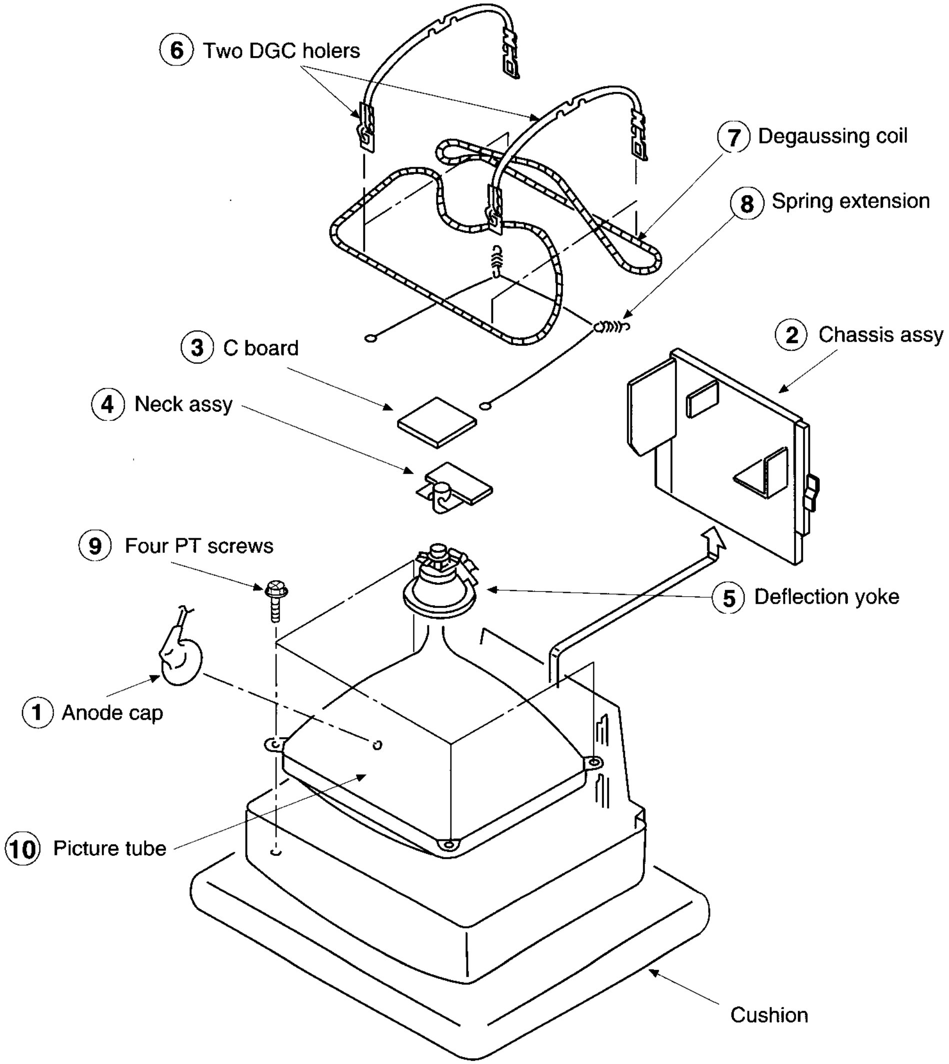

A board
BE-3D EXTENSION BOARD

2-5. A BOARD REMOVAL


A board
CN301

① Remove CN301 before removing A board.

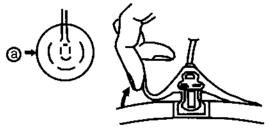
2-7. PICTURE TUBE REMOVAL


⑥ Two DGC holers
⑦ Degaussing coil
⑧ Spring extension
③ C board
② Chassis assy
④ Neck assy
⑨ Four PT screws
⑤ Deflection yoke
① Anode cap
⑩ Picture tube
Cushion

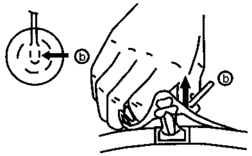
• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

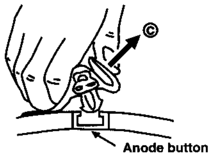
* **REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ


ⓒ
Anode button

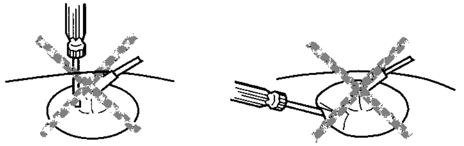
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

• HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don’t turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

For safety reasons, on no account should the plates be removed and not refitted after servicing.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

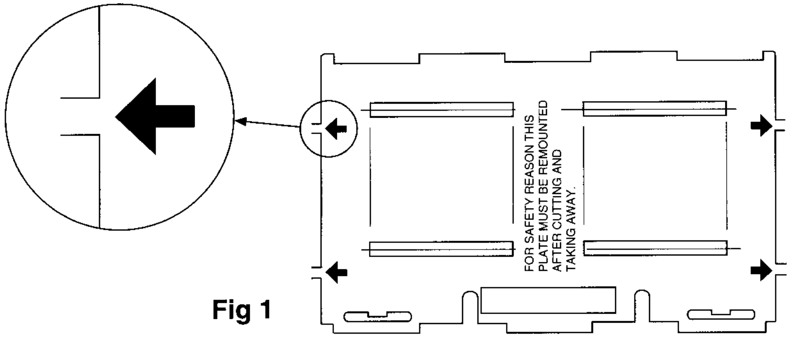

FOR SAFETY REASON THIS
PLATE MUST BE REMOUNTED
AFTER CUTTING AND
TAKING AWAY.

Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

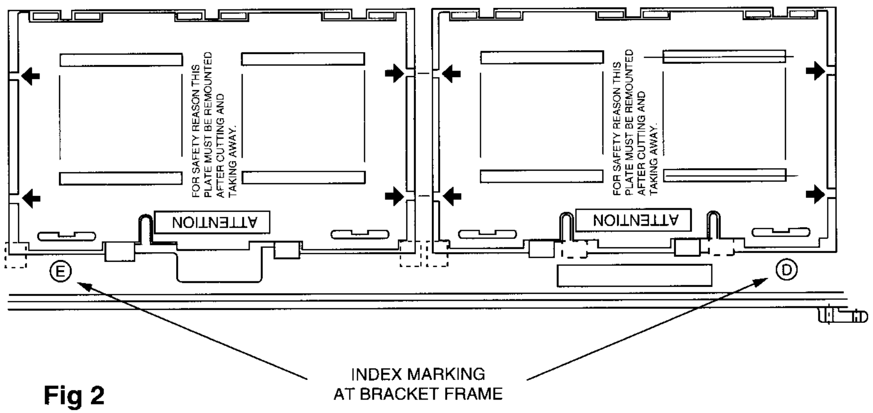

FOR SAFETY REASON THIS
PLATE MUST BE REMOUNTED
AFTER CUTTING AND
TAKING AWAY.
ATTENTION
FOR SAFETY REASON THIS
PLATE MUST BE REMOUNTED
AFTER CUTTING AND
TAKING AWAY.
ATTENTION
E
D
INDEX MARKING
AT BRACKET FRAME

Fig 2

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

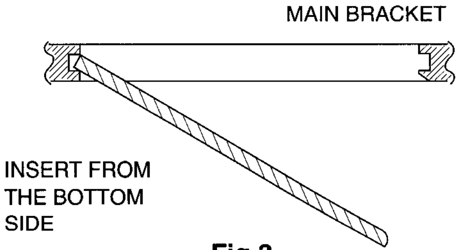

MAIN BRACKET
INSERT FROM
THE BOTTOM
SIDE

Fig 3

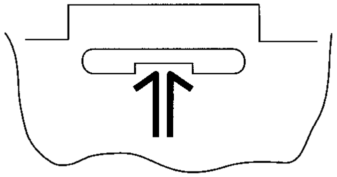


Fig 4

SECTION 3
SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

◑ Contrast .... 80% (or remote control normal)
☼ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparation:
- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

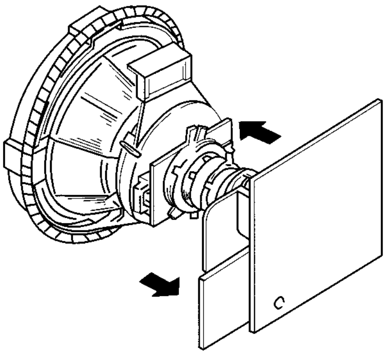


Fig. 3-1

Fig. 3-2

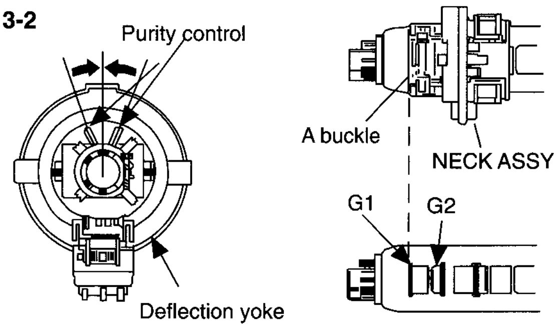
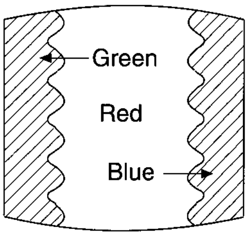

Purity control
A buckle
NECK ASSY
G1
G2
Deflection yoke

Fig. 3-3


Green
Red
Blue

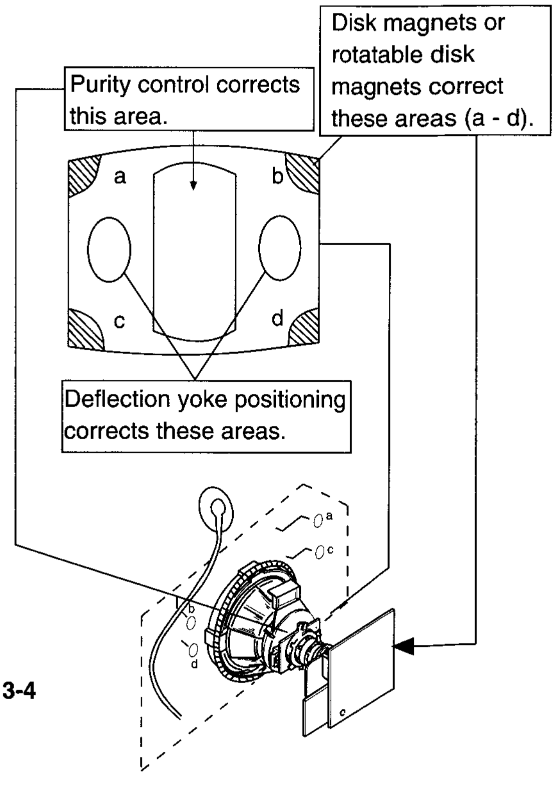

Disk magnets or rotatable disk magnets correct these areas (a - d).
Purity control corrects this area.
a
b
c
d
Deflection yoke positioning corrects these areas.
a
c
b
d

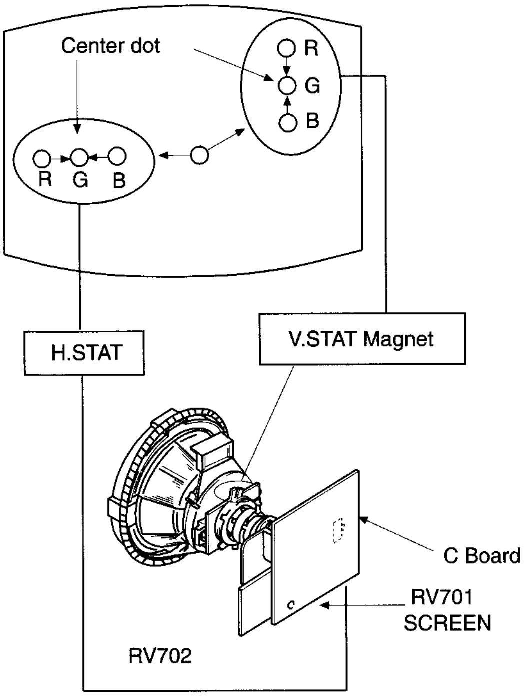
Fig. 3-4

3-2. CONVERGENCE

Preparation:

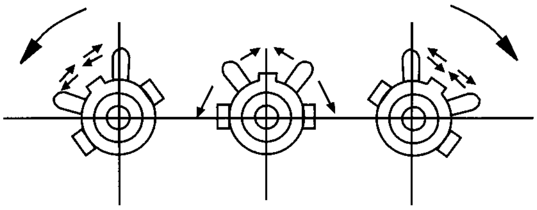
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

(1) Horizontal and vertical static convergence

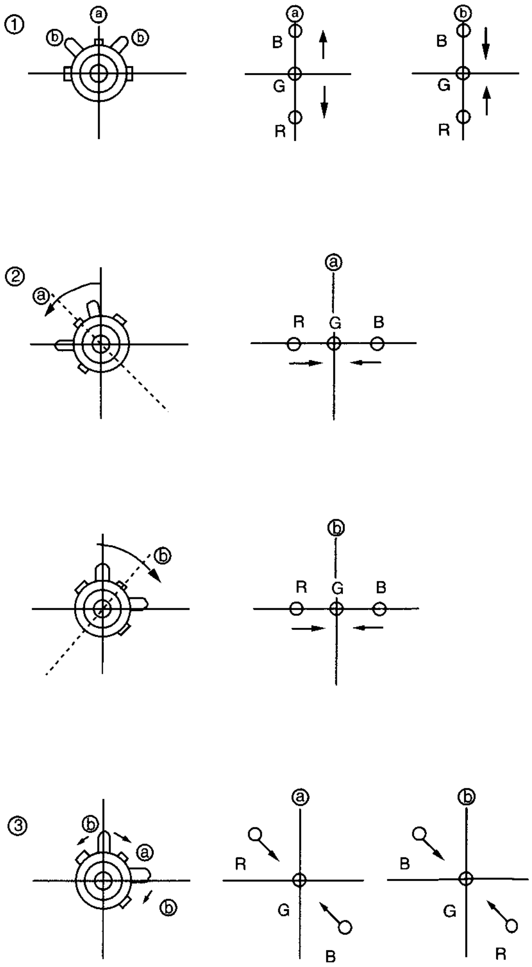


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

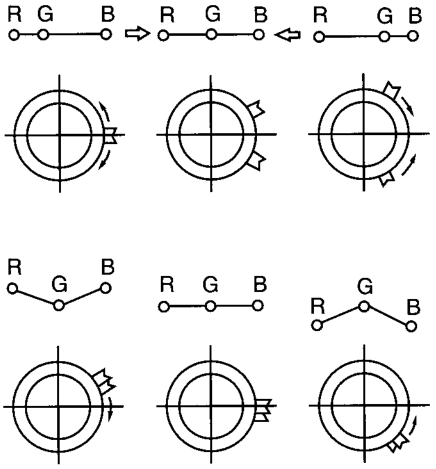
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

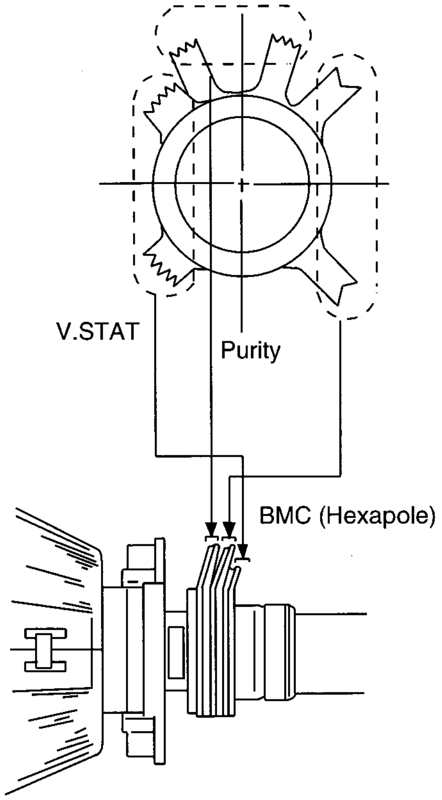


4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet


R G B
R G B
R G B
R B
G
R G B
G
R B


V.STAT
Purity
BMC (Hexapole)

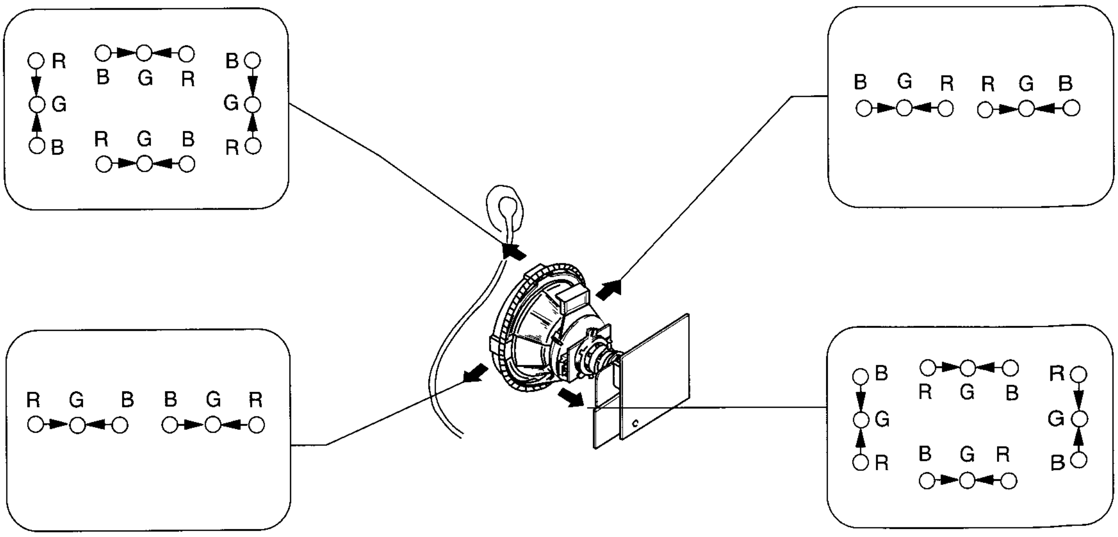
- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

(2) Dynamic convergence adjustment.

Preparation:

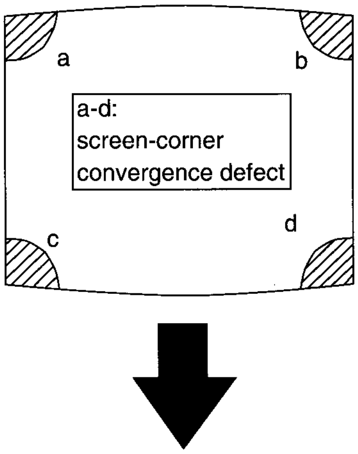
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

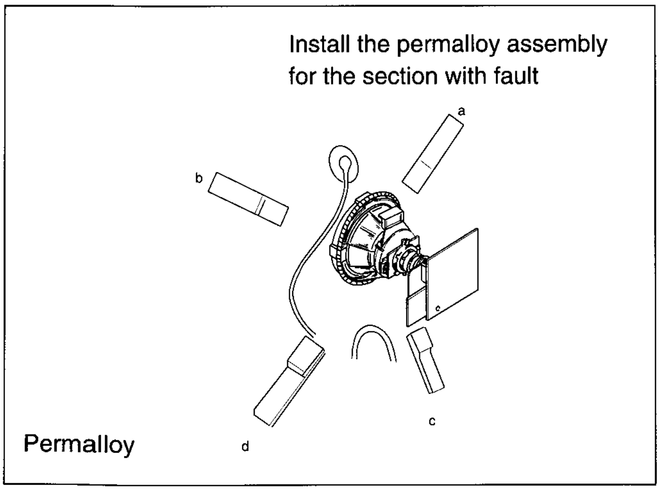
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Re-install the deflection yoke spacer.


R G B
B G R
R G B
B G R
B G R R G B
R G B B G R
B G R
R G B
B G R
R G B

(3) Screen corner convergence.

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.


a
b
a-d:
screen-corner
convergence defect
c
d


Install the permalloy assembly
for the section with fault
a
b
c
d
Permalloy

3-3. WHITE BALANCE

G2 Setting

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of 3.0V ±0.3V.

White balance adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

PICTURE ADJUSTMENT

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

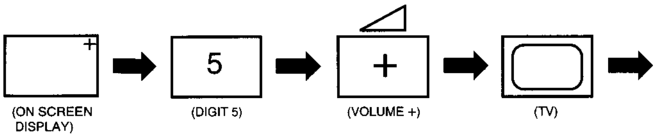
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-839.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT-- " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU

> Picture adjustment
Geometry
Wide
MSP
IC status
Current TV status

4. Move to the corresponding adjustment using the ⬇ button on the commander.
5. Press the + button to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

PICTURE ADJUSTMENT

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap Fo	7
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	5

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

WIDE

V Aspect	43
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

MSP	
AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	41
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

IC STATUS (CXA2000 / CXA2040)	
CXA2000	
H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1
CXA2040	
Sync sep	1
S1 mode pin	01
S2 mode pin	01
TUNER	
Tuner status	01101011

TV STATUS	
Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	29/25
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

SUB BRIGHTNESS ADJUSTMENT

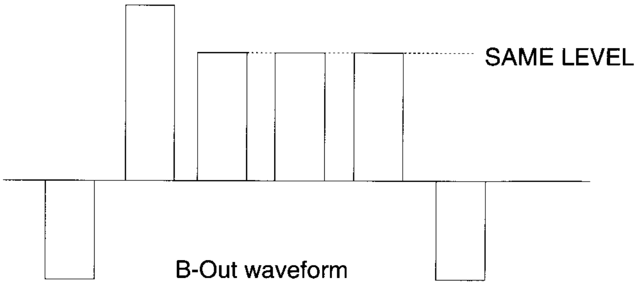
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

SUB COLOUR ADJUSTMENT

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

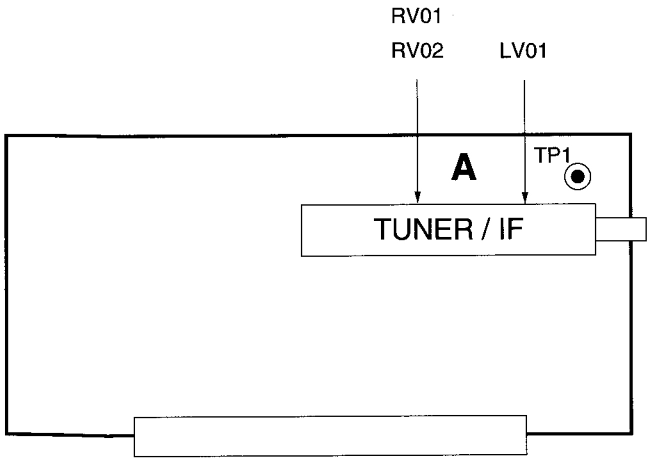
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of 3.0V ± 0.3V.

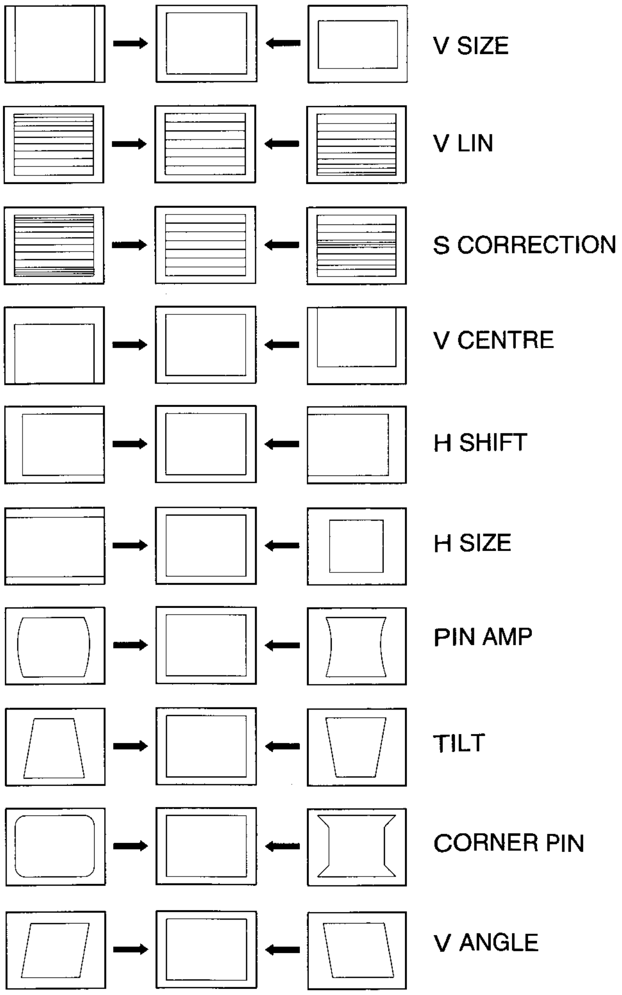


- A Board component side -

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT	
V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

00	Switch test mode 2 off
01	Picture maximum
02	Picture minimum
03	Volume 30%
04	Set service menu mode
05	Set production menu mode
06	Volume 80%
07	Set ageing condition
08	Set shipping condition
09	Language reset
10	No function
11	Adjustment without OSD
12	Dummy
13	Display TV configuration
14	Forced AV 6:9 mode
15	Reset LPM from ROM data
16	copy LPM to reset memory
17	Preset label for AV sources
18	RGB priority on/off
19	Clear all preset labels
20	No function
21	Sub contrast
22	Sub colour
23	Sub brightness
24	Set destination = U
25	Set destination = D
26	Set destination = B
27	Set destination = K
28	Set destination = L
29	Set destination = E
30	No function
31	Set destination =A
32	Dummy
33	Auto AGC
34	Dummy
35	Manual AGC adjust

36-40	Dummy
41	Re-initialise NVM
42	Production use only
43	Initialise geometry settings
44	Initialise all favourite pages = 100
45	Channel locks = off
46	Dealer commander mode
47	Default MSP settings
48	Restore NVM test byte
49	Delete NVM test byte
50-60	No function
61	Turn on Dolby Pro Logic mode
62	White noise to left speaker
63	White noise to right speaker
64	White noise to centre speaker
65	White noise to rear speaker
66	Set standard stereo mode
67	Set Pro Logic normal mode
68	Set Pro Logic wide mode
69	Set Pro Logic phantom mode
70	No function
71	Picture rotation on/off
72	Dolby register settings
74	No function
75	Reset picture colour balance
76	Reset picture geometry
77	Reset sound settings
78	Reset error codes in the NVM
79-99	No function

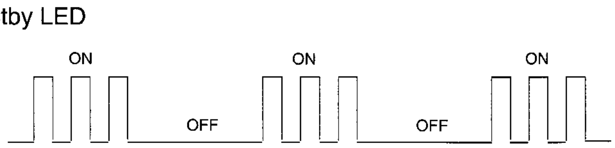
4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

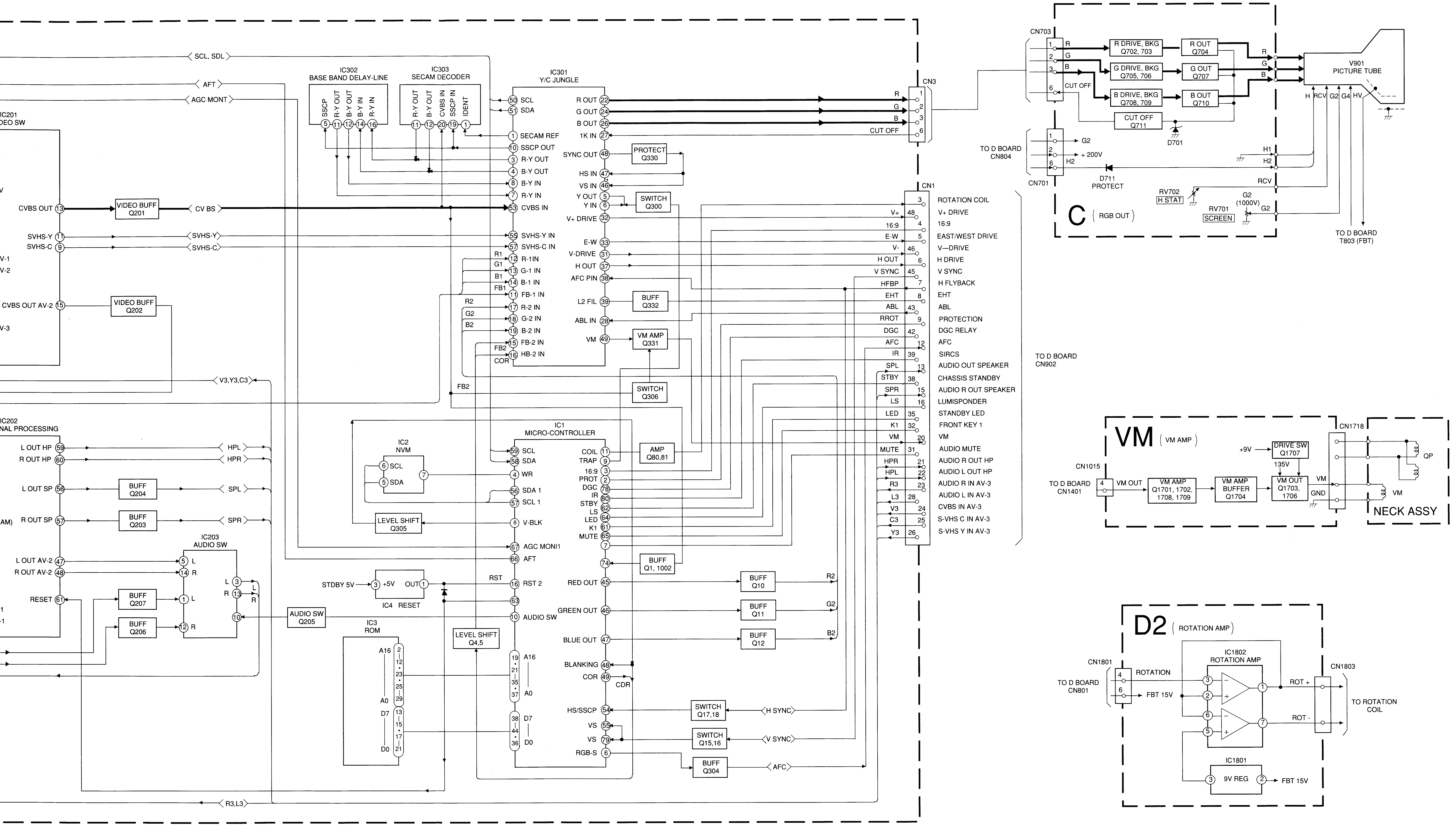
The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

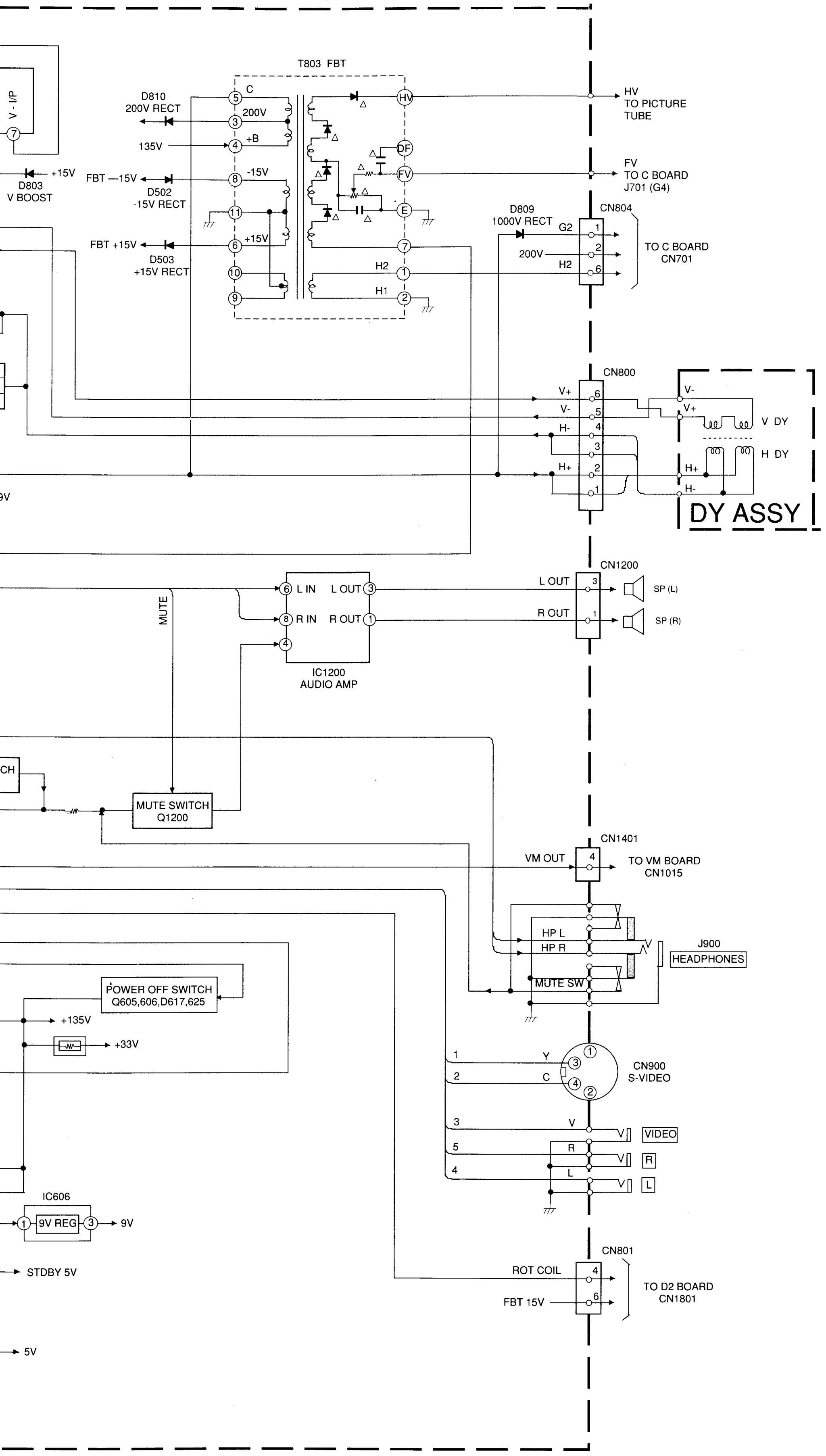
Table 1

ERROR	LED ERROR COUNT
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Choroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD LOW < POWER UP ONLY >	11
M3L RXD LOW < POWER UP ONLY >	12
M3L ENABLE LOW < POWER UP ONLY >	13
M3L TXD & RXD LOW < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
AV switch cannot power on reset	16
Cannot initialise jungle	17
NVM acknowledge fail after initialisation	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compacttext run-time failure	20
AVSWITCH response failure after power up	21
JUNGLE/CHROMA controller response failure after power up	22
CompactText does not respond	23

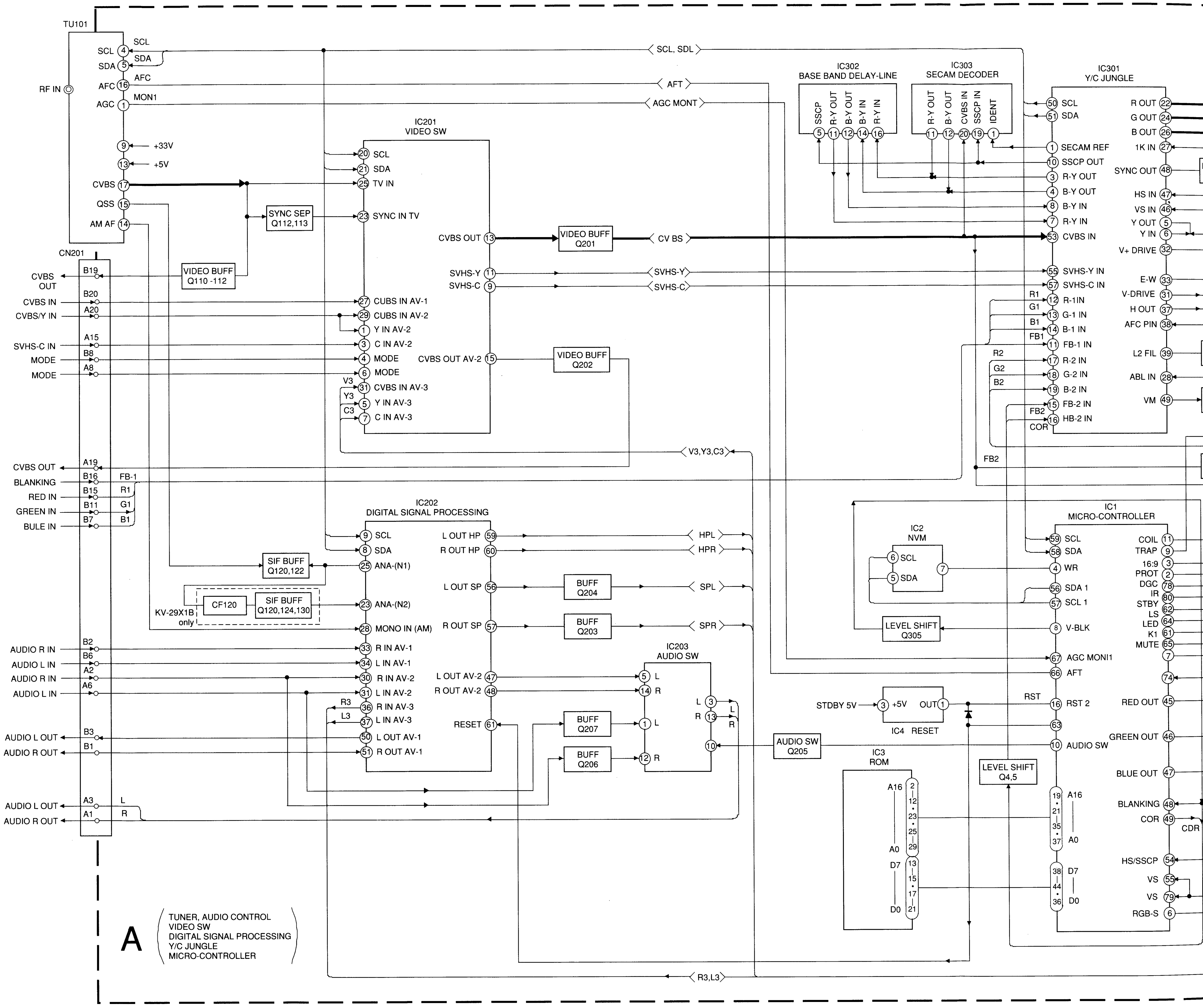
Flash Timing Example : e.g. error number 3.




SCL, SDL
AFT
AGC MONT
IC201
DEO SW
CVBS OUT
VIDEO BUFF Q201
CV BS
SVHS-Y
SVHS-C
CVBS OUT AV-2
VIDEO BUFF Q202
V3,Y3,C3
IC202
NAL PROCESSING
L OUT HP
R OUT HP
HPL
HPR
L OUT SP
BUFF Q204
SPL
R OUT SP
BUFF Q203
SPR
IC203 AUDIO SW
L OUT AV-2
R OUT AV-2
RESET
BUFF Q207
BUFF Q206
AUDIO SW Q205
R3,L3
IC302 BASE BAND DELAY-LINE
SSCP
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
IC303 SECAM DECODER
CVBS IN
SSCP IN
IDENT
IC301 Y/C JUNGLE
SCL
SDA
SECAM REF
SSCP OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
CVBS IN
SVHS-Y IN
SVHS-C IN
R-1IN
G-1 IN
B-1 IN
FB-1 IN
R-2 IN
G-2 IN
B-2 IN
FB-2 IN
HB-2 IN
COR
R OUT
G OUT
B OUT
1K IN
SYNC OUT
PROTECT Q330
HS IN
VS IN
Y OUT
Y IN
SWITCH Q300
V+ DRIVE
E-W
V-DRIVE
H OUT
AFC PIN
L2 FIL
BUFF Q332
ABL IN
VM
VM AMP Q331
SWITCH Q306
FB2
IC2 NVM
SCL
SDA
WR
LEVEL SHIFT Q305
IC1 MICRO-CONTROLLER
SDA 1
SCL 1
V-BLK
AGC MONI1
AFT
RST 2
AUDIO SW
COIL
TRAP
16:9
PROT
DGC
IR
STBY
LS
LED
K1
MUTE
AMP Q80,81
BUFF Q1, 1002
STDBY 5V
+5V
OUT
IC4 RESET
RST
IC3 ROM
A16
A0
D7
D0
LEVEL SHIFT Q4,5
RED OUT
GREEN OUT
BLUE OUT
BUFF Q10
BUFF Q11
BUFF Q12
BLANKING
COR
CDR
HS/SSCP
VS
RGB-S
SWITCH Q17,18
SWITCH Q15,16
BUFF Q304
H SYNC
V SYNC
AFC
CN3
CUT OFF
CN1
ROTATION COIL
V+ DRIVE
16:9
EAST/WEST DRIVE
V—DRIVE
H DRIVE
V SYNC
H FLYBACK
EHT
ABL
PROTECTION
DGC RELAY
AFC
SIRCS
AUDIO OUT SPEAKER
CHASSIS STANDBY
AUDIO R OUT SPEAKER
LUMISPONDER
STANDBY LED
FRONT KEY 1
VM
AUDIO MUTE
AUDIO R OUT HP
AUDIO L OUT HP
AUDIO R IN AV-3
AUDIO L IN AV-3
CVBS IN AV-3
S-VHS C IN AV-3
S-VHS Y IN AV-3
TO D BOARD CN902
CN703
R DRIVE, BKG Q702, 703
G DRIVE, BKG Q705, 706
B DRIVE, BKG Q708, 709
R OUT Q704
G OUT Q707
B OUT Q710
CUT OFF Q711
D701
V901 PICTURE TUBE
TO D BOARD CN804
CN701
G2
+ 200V
H2
D711 PROTECT
RV702 H STAT
RV701 SCREEN
G2 (1000V)
H1
RCV
G4
HV
C (RGB OUT)
TO D BOARD T803 (FBT)
VM (VM AMP)
CN1015
TO D BOARD CN1401
VM OUT
VM AMP Q1701, 1702, 1708, 1709
VM AMP BUFFER Q1704
+9V
DRIVE SW Q1707
135V
VM OUT Q1703, 1706
GND
CN1718
QP
NECK ASSY
D2 (ROTATION AMP)
CN1801
TO D BOARD CN801
ROTATION
FBT 15V
IC1802 ROTATION AMP
ROT +
ROT -
CN1803
TO ROTATION COIL
IC1801 9V REG
FBT 15V

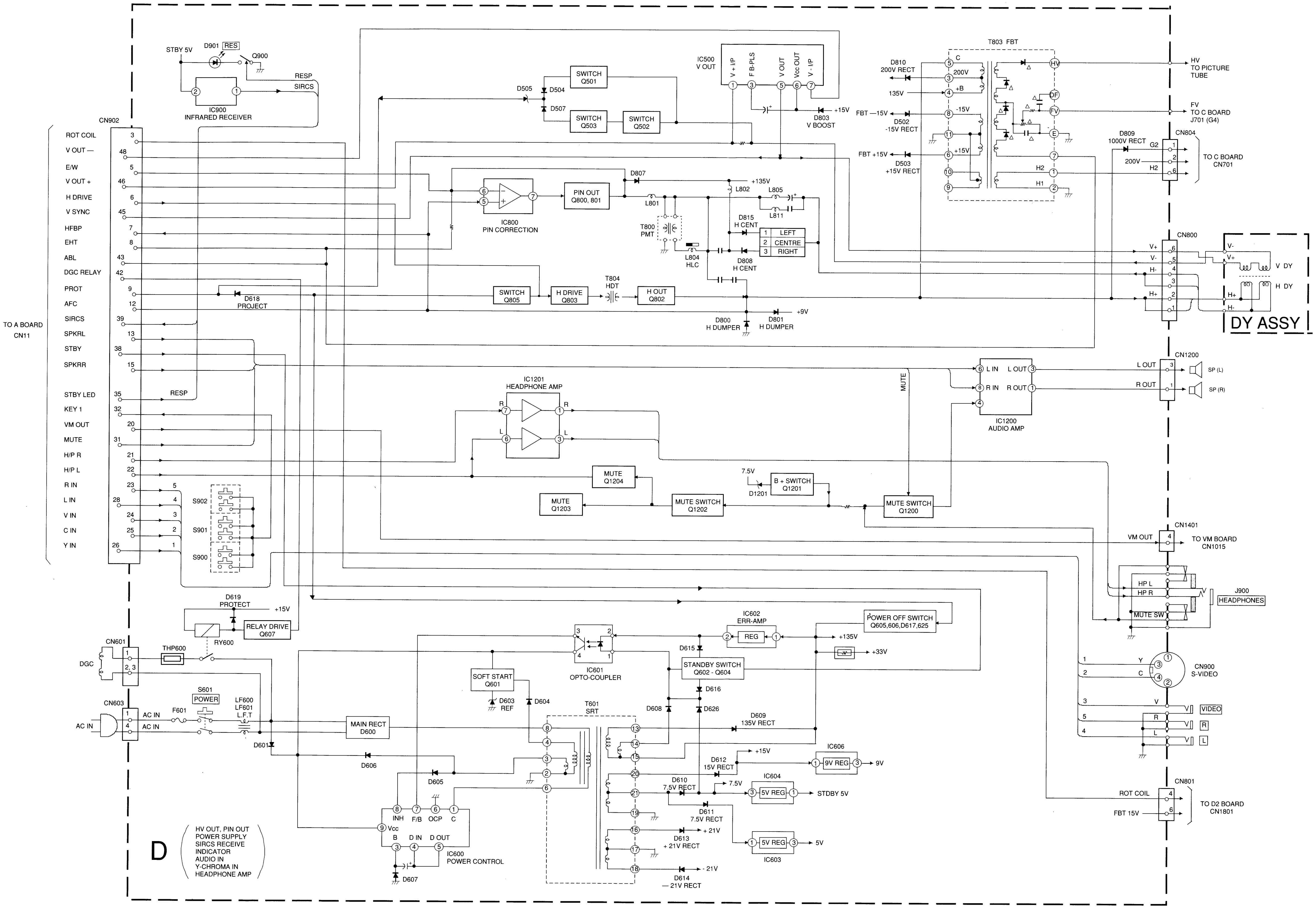

T803 FBT
D810
200V RECT
135V
D803
V BOOST
FBT −15V
D502
-15V RECT
FBT +15V
D503
+15V RECT
200V
+B
-15V
+15V
HV
TO PICTURE TUBE
FV
TO C BOARD
J701 (G4)
D809
1000V RECT
CN804
G2
200V
H2
H1
TO C BOARD
CN701
CN800
V+
V-
H-
H+
V DY
H DY
DY ASSY
CN1200
L OUT
R OUT
SP (L)
SP (R)
L IN
R IN
L OUT
R OUT
IC1200
AUDIO AMP
MUTE
MUTE SWITCH
Q1200
CN1401
VM OUT
TO VM BOARD
CN1015
HP L
HP R
MUTE SW
J900
HEADPHONES
POWER OFF SWITCH
Q605,606,D617,625
+135V
+33V
CN900
S-VIDEO
Y
C
V
R
L
VIDEO
IC606
9V REG
9V
STDBY 5V
5V
CN801
ROT COIL
FBT 15V
TO D2 BOARD
CN1801

BLOCK DIAGRAM (2)

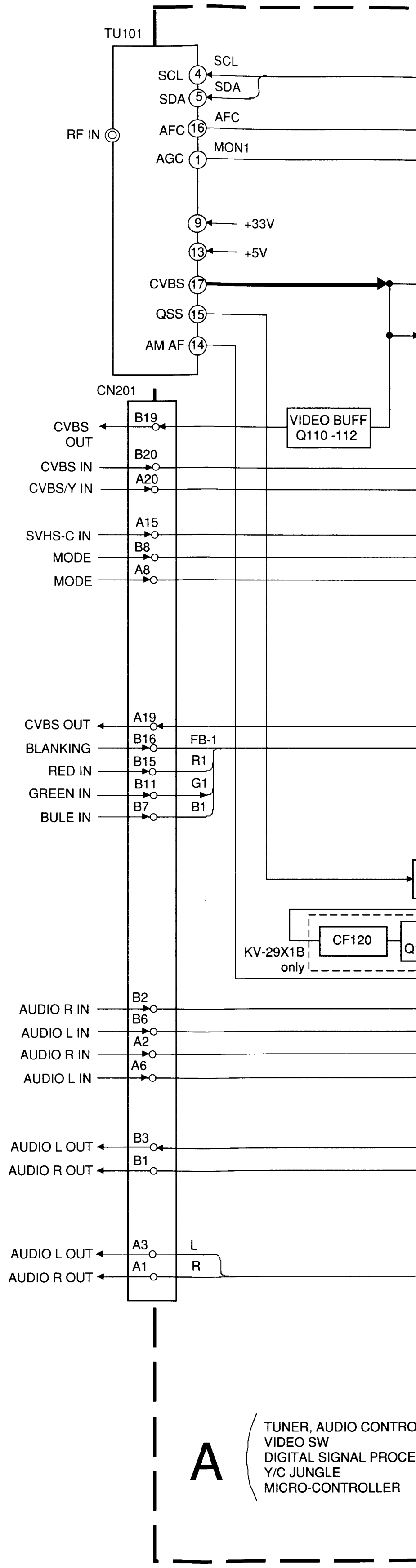

TU101
RF IN
SCL
SDA
AFC
AGC
MON1
+33V
+5V
CVBS
QSS
AM AF
SCL, SDL
AFT
AGC MONT
IC201
VIDEO SW
SCL
SDA
TV IN
SYNC SEP
Q112,113
SYNC IN TV
CVBS OUT
VIDEO BUFF
Q201
CV BS
SVHS-Y
SVHS-C
CN201
CVBS OUT
CVBS IN
CVBS/Y IN
SVHS-C IN
MODE
MODE
VIDEO BUFF
Q110 -112
CUBS IN AV-1
CUBS IN AV-2
Y IN AV-2
C IN AV-2
MODE
MODE
CVBS OUT AV-2
VIDEO BUFF
Q202
CVBS IN AV-3
Y IN AV-3
C IN AV-3
V3
Y3
C3
V3,Y3,C3
CVBS OUT
BLANKING
RED IN
GREEN IN
BULE IN
FB-1
R1
G1
B1
IC202
DIGITAL SIGNAL PROCESSING
SCL
SDA
ANA-(N1)
ANA-(N2)
MONO IN (AM)
SIF BUFF
Q120,122
CF120
SIF BUFF
Q120,124,130
KV-29X1B only
L OUT HP
R OUT HP
L OUT SP
R OUT SP
HPL
HPR
SPL
SPR
BUFF
Q204
BUFF
Q203
AUDIO R IN
AUDIO L IN
AUDIO R IN
AUDIO L IN
R IN AV-1
L IN AV-1
R IN AV-2
L IN AV-2
R IN AV-3
L IN AV-3
R3
L3
L OUT AV-1
R OUT AV-1
L OUT AV-2
R OUT AV-2
RESET
AUDIO L OUT
AUDIO R OUT
AUDIO L OUT
AUDIO R OUT
IC203
AUDIO SW
BUFF
Q207
BUFF
Q206
AUDIO SW
Q205
R3,L3
IC302
BASE BAND DELAY-LINE
SSCP
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
IC303
SECAM DECODER
R-Y OUT
B-Y OUT
CVBS IN
SSCP IN
IDENT
IC301
Y/C JUNGLE
SCL
SDA
SECAM REF
SSCP OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
CVBS IN
SVHS-Y IN
SVHS-C IN
R-1IN
G-1 IN
B-1 IN
FB-1 IN
R-2 IN
G-2 IN
B-2 IN
FB-2 IN
HB-2 IN
R1
G1
B1
FB1
R2
G2
B2
FB2
COR
R OUT
G OUT
B OUT
1K IN
SYNC OUT
HS IN
VS IN
Y OUT
Y IN
V+ DRIVE
E-W
V-DRIVE
H OUT
AFC PIN
L2 FIL
ABL IN
VM
FB2
IC1
MICRO-CONTROLLER
IC2
NVM
SCL
SDA
WR
SDA 1
SCL 1
V-BLK
LEVEL SHIFT
Q305
AGC MONI1
AFT
STDBY 5V
+5V
OUT
IC4 RESET
RST
RST 2
AUDIO SW
LEVEL SHIFT
Q4,5
IC3
ROM
A16
A0
D7
D0
COIL
TRAP
16:9
PROT
DGC
IR
STBY
LS
LED
K1
MUTE
RED OUT
GREEN OUT
BLUE OUT
BLANKING
COR
CDR
HS/SSCP
VS
VS
RGB-S
A
TUNER, AUDIO CONTROL
VIDEO SW
DIGITAL SIGNAL PROCESSING
Y/C JUNGLE
MICRO-CONTROLLER

SECTION 5
DIAGRAMS

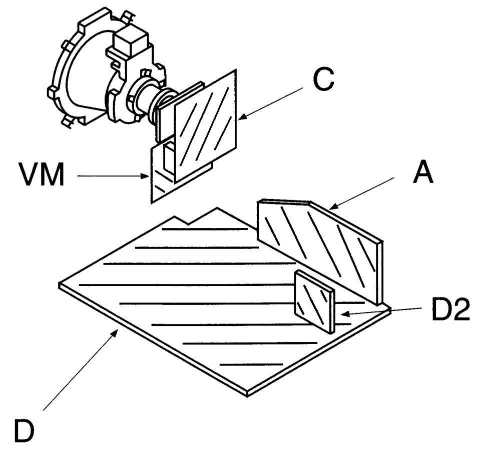
5-1. BLOCK DIAGRAM (1)


STBY 5V
D901 RES
Q900
RESP
SIRCS
IC900 INFRARED RECEIVER
CN902
ROT COIL
V OUT —
E/W
V OUT +
H DRIVE
V SYNC
HFBP
EHT
ABL
DGC RELAY
PROT
AFC
SIRCS
SPKRL
STBY
SPKRR
STBY LED
KEY 1
VM OUT
MUTE
H/P R
H/P L
R IN
L IN
V IN
C IN
Y IN
TO A BOARD CN11
S902
S901
S900
D505
D504
D507
SWITCH Q501
SWITCH Q503
SWITCH Q502
IC500 V OUT
V + I/P
F.B-PLS
V OUT
Vcc OUT
V - I/P
+15V
D803 V BOOST
D807
+135V
IC800 PIN CORRECTION
PIN OUT Q800, 801
L801
L802
L805
L811
T800 PMT
D815 H CENT
D808 H CENT
L804 HLC
LEFT
CENTRE
RIGHT
D618 PROJECT
SWITCH Q805
H DRIVE Q803
T804 HDT
H OUT Q802
D800 H DUMPER
D801 H DUMPER
+9V
T803 FBT
D810 200V RECT
135V
FBT —15V
D502 -15V RECT
FBT +15V
D503 +15V RECT
200V
+B
-15V
+15V
HV
DF
FV
HV TO PICTURE TUBE
FV TO C BOARD J701 (G4)
D809 1000V RECT
G2
H2
H1
CN804
TO C BOARD CN701
CN800
V+
V-
H-
H+
V DY
H DY
DY ASSY
CN1200
L OUT
R OUT
SP (L)
SP (R)
L IN
R IN
IC1200 AUDIO AMP
MUTE
IC1201 HEADPHONE AMP
MUTE Q1204
MUTE Q1203
MUTE SWITCH Q1202
7.5V
B + SWITCH Q1201
D1201
MUTE SWITCH Q1200
CN1401
VM OUT
TO VM BOARD CN1015
HP L
HP R
MUTE SW
J900 HEADPHONES
D619 PROTECT
+15V
RELAY DRIVE Q607
RY600
CN601
DGC
THP600
CN603
AC IN
F601
S601 POWER
LF600 LF601 L.F.T
D601
MAIN RECT D600
D606
D605
SOFT START Q601
D603 REF
D604
IC601 OPTO-COUPLER
IC602 ERR-AMP
REG
+135V
+33V
POWER OFF SWITCH Q605,606,D617,625
D615
STANDBY SWITCH Q602 - Q604
D616
D626
D608
T601 SRT
D609 135V RECT
D612 15V RECT
IC606
9V REG
9V
D610 7.5V RECT
D611 7.5V RECT
IC604
5V REG
STDBY 5V
D613 + 21V RECT
+ 21V
IC603
5V
D614 — 21V RECT
- 21V
IC600 POWER CONTROL
INH
F/B
OCP
C
Vcc
B
D IN
D OUT
D607
CN900 S-VIDEO
Y
C
V
R
L
VIDEO
CN801
ROT COIL
FBT 15V
TO D2 BOARD CN1801
D
HV OUT, PIN OUT
POWER SUPPLY
SIRCS RECEIVE
INDICATOR
AUDIO IN
Y-CHROMA IN
HEADPHONE AMP

BLOCK DIAGRAM (


TU101
RF IN
SCL
SDA
AFC
AGC
MON1
+33V
+5V
CVBS
QSS
AM AF
CN201
CVBS OUT
VIDEO BUFF Q110 -112
CVBS IN
CVBS/Y IN
SVHS-C IN
MODE
MODE
CVBS OUT
BLANKING
RED IN
GREEN IN
BULE IN
FB-1
R1
G1
B1
KV-29X1B only
CF120
AUDIO R IN
AUDIO L IN
AUDIO R IN
AUDIO L IN
AUDIO L OUT
AUDIO R OUT
AUDIO L OUT
AUDIO R OUT
A
TUNER, AUDIO CONTRO
VIDEO SW
DIGITAL SIGNAL PROCE
Y/C JUNGLE
MICRO-CONTROLLER

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm Rating electrical power ¼ W

- -/\/\/- : nonflammable resistor.
- — : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- # : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

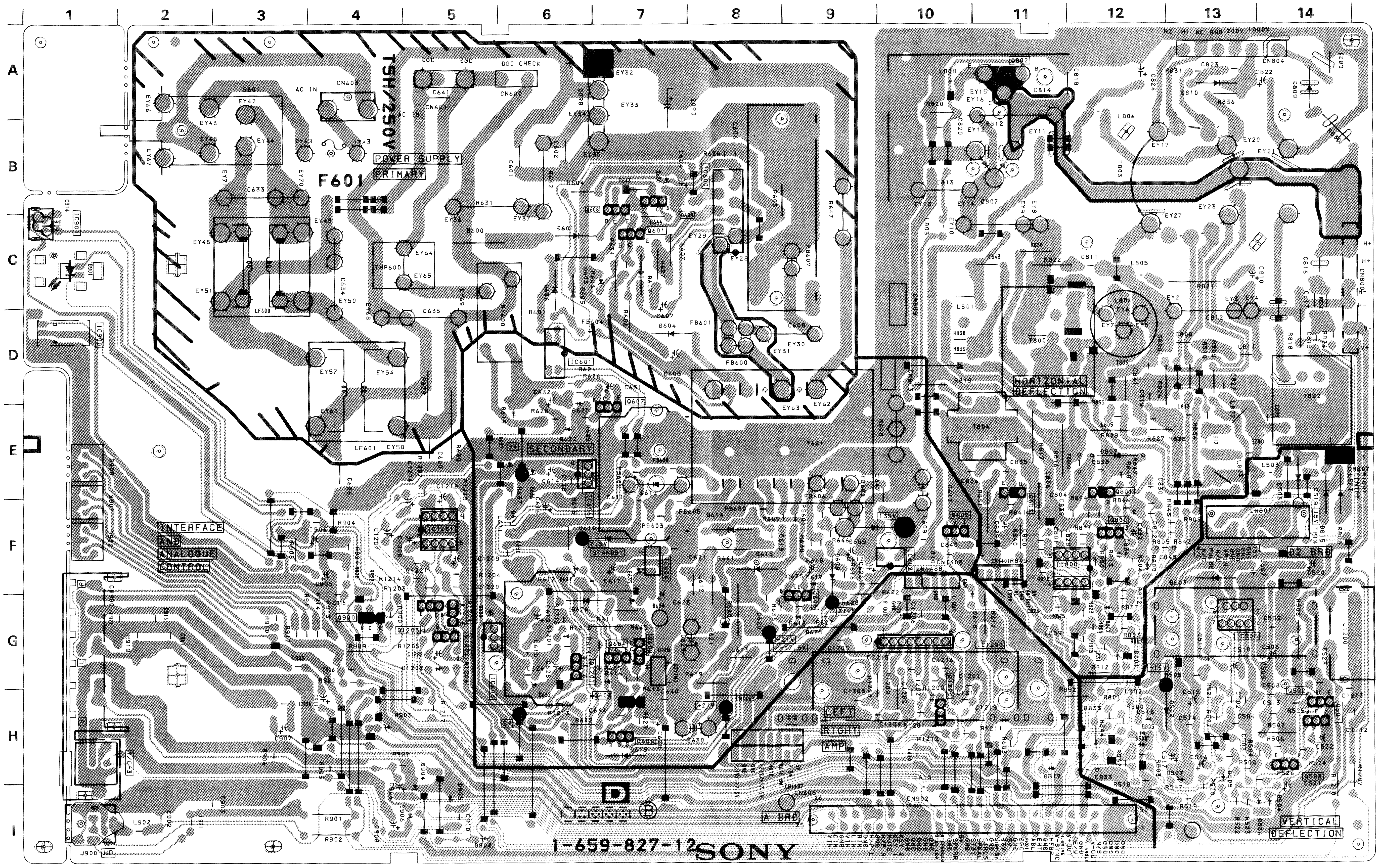
Reference information

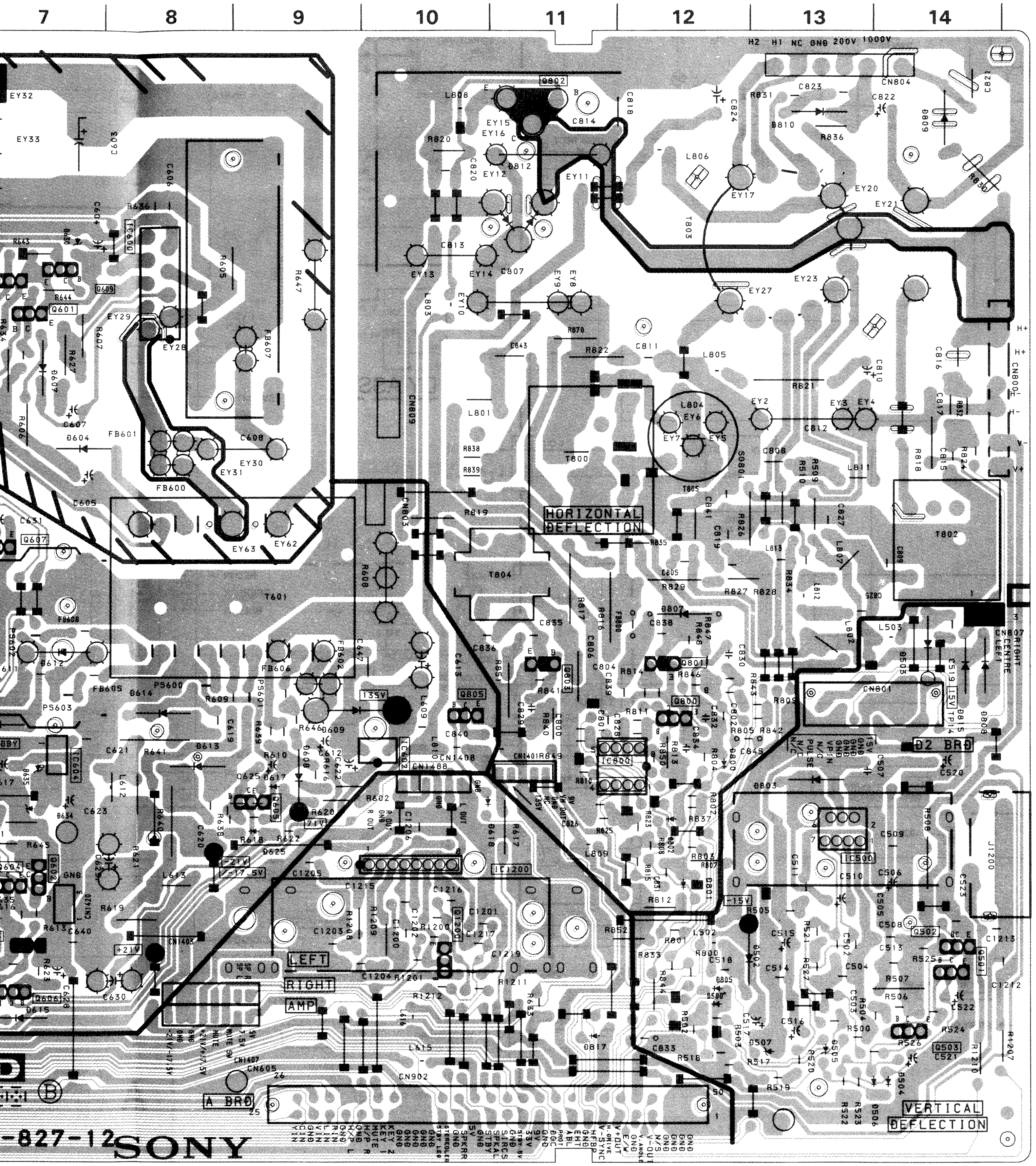
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✕	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

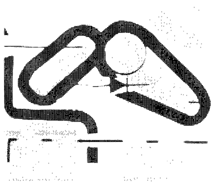
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- ⇨ : signal path. (RF)

D [HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICAITON]

D Board


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
T5H/250V
F601
POWER SUPPLY
PRIMARY
SECONDARY
STANDBY
INTERFACE
AND
ANALOGUE
CONTROL
HORIZONTAL
DEFLECTION
VERTICAL
DEFLECTION
LEFT
RIGHT
AMP
D2 BRD
A BRD
DGC CHECK
AC IN
H2 H1 NC GND 200V 1000V
J900 HP
1-659-827-12
SONY

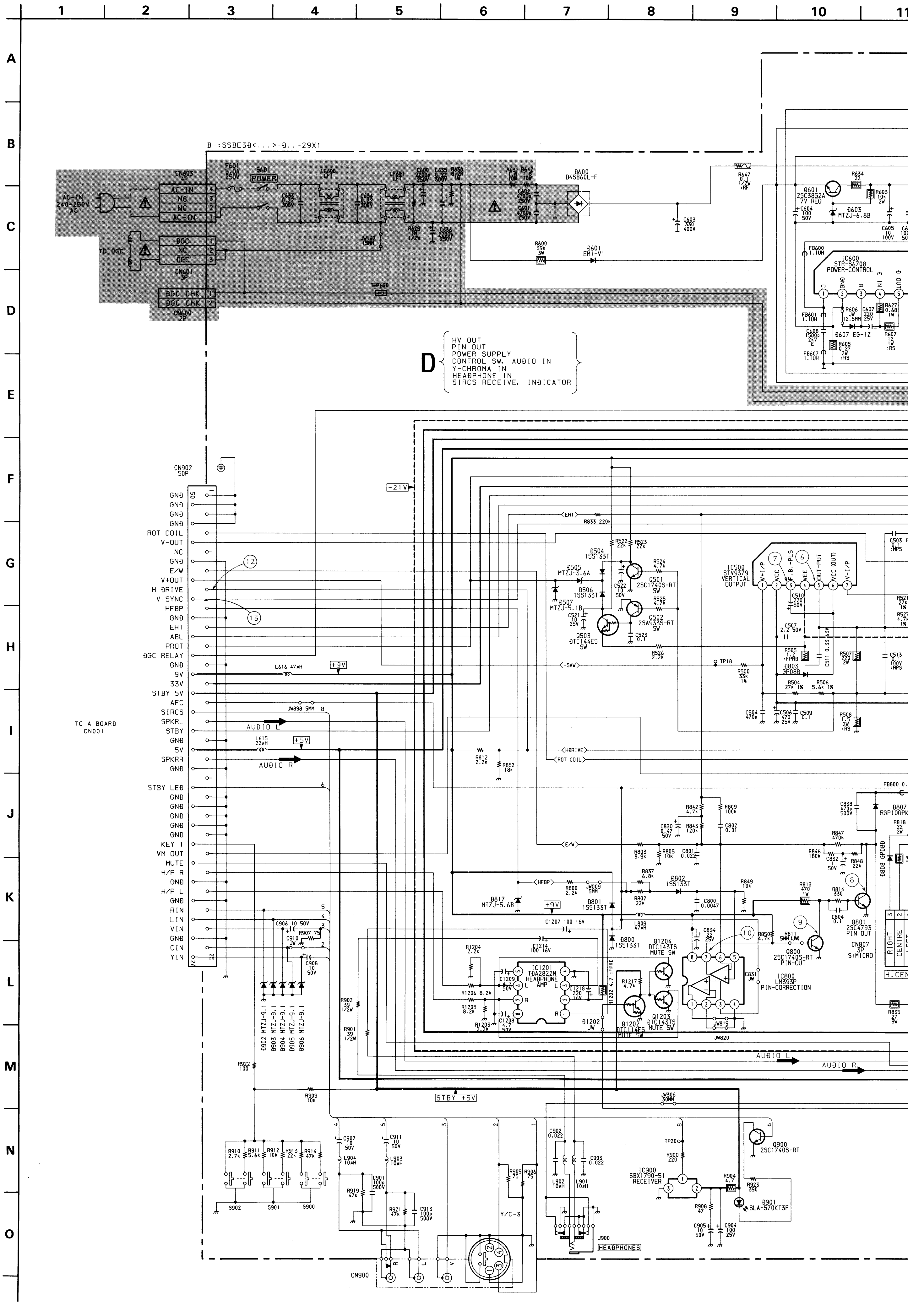

7
8
9
10
11
12
13
14
HORIZONTAL DEFLECTION
VERTICAL DEFLECTION
LEFT
RIGHT
AMP
A BRD
D2 BRD
H2 H1 NC GND 200V 1000V
T601
T800
T802
T804
-827-12
SONY

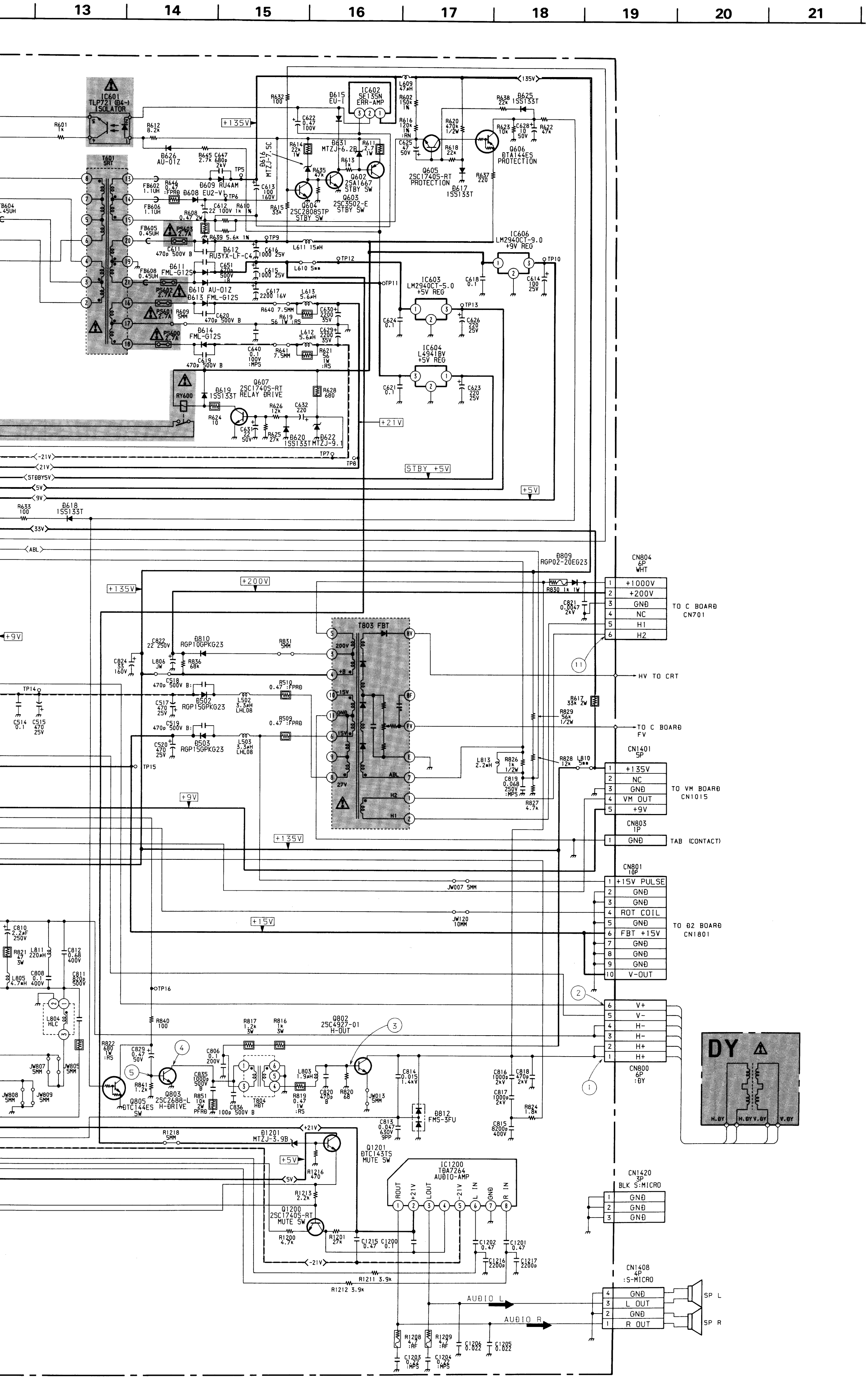


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD

IC		DIODE	
IC500	G-13	D600	A-7
IC600	B-8	D601	C-6
IC601	D-6	D603	C-7
IC602	F-10	D604	D-7
IC603	G-5	D605	C-6
IC604	F-7	D606	C-6
IC606	E-6	D607	C-7
IC800	F-12	D608	F-9
IC900	D-1	D609	F-9
IC1200	G-10	D610	F-7
IC1201	F-5	D611	F-6
		D612	E-7
TRANSISTOR		D613	F-8
Q501	H-14	D614	F-8
Q502	H-14	D615	H-7
Q503	H-14	D616	G-7
Q601	C-7	D617	F-9
Q602	G-7	D618	F-11
Q603	H-7	D619	E-6
Q604	G-7	D620	E-6
Q605	F-9	D622	E-6
Q606	H-7	D625	G-9
Q607	D-7	D626	G-6
Q800	F-12	D631	F-6
Q801	E-12	D800	F-12
Q802	A-11	D801	G-12
Q803	E-11	D802	G-12
Q805	F-10	D803	F-13
Q900	G-4	D807	E-12
Q1200	H-10	D808	E-14
Q1201	G-6	D809	A-14
Q1202	G-5	D810	A-13
Q1203	G-5	D812	B-11
Q1204	G-5	D815	E-14
DIODE		D817	H-11
D500	H-12	D901	C-1
D502	H-13	D902	I-5
D503	I-14	D903	H-4
D504	H-11	D904	H-5
D505	H-13	D905	I-5
D506	I-14	D906	I-5
D507	H-13	D1201	G-6


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
B-:SSBE3Ð<...>-Ð..-29X1
CN603 4P
AC-IN 240-250V AC
AC-IN
NC
NC
AC-IN
TO ÐGC
ÐGC
NC
ÐGC
CN601 3P
ÐGC CHK
ÐGC CHK
CN600 2P
THP600
F601 5.0A 250V
S601 POWER
LF600 LFT
LF601 LFT
C683 0.22 300V
C684 0.22 300V
C600 2200p 250V
C635 0.22 300V
R630 8.2M 1W
R631 3.3 10W
R642 3.3 10W
C602 4700p 250V
C601 4700p 250V
R629 1M 1/2W
C636 2200p 250V
JW142 15MM
Ð600 Ð4SB60L-F
C603 330 400V
R600 39k 3W
Ð601 EM1-V1
R647 0.1 1/2W :RF
Q601 2SC3852A 7V REG
R634 22
R603 10k 2W
C604 100 50V
Ð603 MTZJ-6.8B
C605 10 100V
FB600 1.1UH
IC600 STR-S6708 POWER-CONTROL
FB601 1.1UH
R606 JW 12.5MM
C607 220 25V
R627 0.68 1W
C608 1500p 2kV E
Ð607 EG-1Z
R607 12 1W :RS
R605 0.27 2W :RS
FB607 1.1UH
D
HV OUT
PIN OUT
POWER SUPPLY
CONTROL SW. AUDIO IN
Y-CHROMA IN
HEADPHONE IN
SIRCS RECEIVE. INDICATOR
CN902 50P
GNÐ
ROT COIL
V-OUT
NC
E/W
V+OUT
H ÐRIVE
V-SYNC
HFBP
EHT
ABL
PROT
ÐGC RELAY
9V
33V
STBY 5V
AFC
SIRCS
SPKRL
STBY
5V
SPKRR
STBY LEÐ
KEY 1
VM OUT
MUTE
H/P R
H/P L
RIN
LIN
VIN
CIN
YIN
TO A BOARÐ CN001
-21V
(EHT)
R833 220k
R522 22k
R523 22k
Ð504 1SS133T
Ð505 MTZJ-3.6A
R524 4.7k
Q501 2SC1740S-RT SW
Ð506 1SS133T
Ð507 MTZJ-5.1B
C522 10 50V
C521 10 25V
R525 4.7k
Q502 2SA933S-RT SW
Q503 ÐTC144ES SW
C523 0.1
R526 2.2k
IC500 STV9379 VERTICAL OUTPUT
V+I/P
VCC
F.B.-PLS
VEE
OUT-PUT
VCC (OUT)
V-I/P
C510 220 50V
C507 2.2 50V
C511 0.33 63V
R505 1.5 :FPRÐ
Ð803 GP08Ð
R507 220 2W
R504 27k 1%
R506 5.6k 1%
C503 0.1 :MPS
C513 0.1 100V :MPS
TP18
R500 33k 1%
C504 470p
C506 470 25V
C509 0.1
R508 1.5 2W :RS
L616 47µH
+9V
JW898 5MM
AUDIO L
L615 22µH
+5V
AUDIO R
(HÐRIVE)
(ROT COIL)
R812 2.2k
R852 18k
FB800
C838 470p 500V
Ð807 RGP10GPK
R818 22 2W
R842 4.7k
R809 100k
C830 0.47 50V
R843 120k
C802 0.01
(E/W)
R847 470k
R803 3.9k
R805 10k
C801 0.022
R846 180k
C832 1 50V
R848 22k
Ð808 GP08Ð
(HFBP)
R800 2.2k
JW009 5MM
R837 6.8k
Ð802 1SS133T
R849 10k
R813 470 1W
R814 330
Q801 2SC4793 PIN OUT
Ð817 MTZJ-5.6B
Ð801 1SS133T
R802 22k
C800 0.0047
C804 0.1
L809 47µH
C1207 100 16V
Ð800 1SS133T
C834 22 25V
R850 4.7k
R811 5MM (JW)
Q800 2SC1740S-RT PIN-OUT
CN807 3P S:MICRO
RIGHT
CENTRE
H.CEN
Q1204 ÐTC143TS MUTE SW
R1204 2.2k
C1214 100 16V
IC1201 TÐA2822M HEAÐPHONE AMP
C1209 4.7 50V
C1218 220 16V
R1202 4.7 :FPRÐ
R1217 4.7k
C831 JW
IC800 LM393P PIN-CORRECTION
R1206 8.2k
R1205 8.2k
R1203 2.2k
C1208 4.7 50V
Ð1202 JW
Q1202 ÐTC114ES MUTE SW
Q1203 ÐTC143TS MUTE SW
JW819
JW820
R835 22 3W
C906 10 50V
R907 75
C910 JW
C908 10 50V
Ð902 MTZJ-9.1
Ð903 MTZJ-9.1
Ð904 MTZJ-9.1
Ð905 MTZJ-9.1
Ð906 MTZJ-9.1
R902 39 1/2W
R901 39 1/2W
R922 100
R909 10k
STBY +5V
JW306 30MM
C907 10 50V
C911 10 50V
L904 10µH
L903 10µH
C901 100p 500V
R919 47k
R921 47k
C913 100p 500V
R905 75
R906 75
Y/C-3
C902 0.022
C903 0.022
L902 10µH
L901 10µH
J900 HEAÐPHONES
TP20
R900 220
IC900 SBX1790-51 RECEIVER
R904 4.7
R923 390
Q900 2SC1740S-RT
Ð901 SLA-570KT3F
R908 47
C905 10 50V
C904 100 25V
R910 2.7k
R911 5.6k
R912 10k
R913 22k
R914 47k
S902
S901
S900
CN900
R
L
V
12
13
6
7
8
9
10


13
14
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16
17
18
19
20
21
IC601 TLP721 (D4-) ISOLATOR
R601 1k
R612 8.2k
T601 SRT
D626 AU-01Z
R645 2.7k
C647 680p 2kV
TP5
D616 MTZJ-7.5C
R632 100
C622 0.47 100V
D615 EU-1
IC602 SE135N ERR-AMP
L609 47μH
R602 150k 1%
R616 120k 1% :RN
C625 47 50V
R620 470k 1/2W
R618 22k
R638 22k
D625 1SS133T
R623 10k
C628 10 50V
R622 47k
Q606 DTA144ES PROTECTION
Q605 2SC1740S-RT PROTECTION
D617 1SS133T
R637 220
+135V
R614 22k 1W
D631 MTZJ-6.2B
R611 2.7 1W
R613 1k
R635 47k
Q602 2SA1667 STBY SW
Q603 2SC3502-E STBY SW
Q604 2SC2808STP STBY SW
R615 33k
C613 100 160V
FB602 1.1UH
R646 0.47 :FPRD
D608 EU2-V1
D609 RU4AM
TP6
C612 22 100V
R610 1k 1%
FB606 1.1UH
R608 0.47 2W
FB604 .45UH
FB605 0.45UH
PS603 2.7A
R639 5.6k 1%
TP9
C611 470p 500V B
D612 RU3YX-LF-C4
C616 1000 25V
L611 15μH
IC606 LM2940CT-9.0 +9V REG
TP10
FB608 0.45UH
D611 FML-G12S
C651 470p 500V B
C615 1000 25V
L610 5MM
TP12
TP11
C618 0.1
C614 100 25V
PS602 2.7A
D610 AU-01Z
D613 FML-G12S
C617 2200 16V
L613 5.6μH
IC603 LM2940CT-5.0 +5V REG
TP13
PS601 2.7A
R609 5MM
C620 470p 500V B
R640 7.5MM
R619 56 1W :RS
C630 2200 35V
C624 0.1
C626 220 25V
PS600 2.7A
D614 FML-G12S
L612 5.6μH
C629 2200 35V
C640 0.1 100V :MPS
R641 7.5MM
R621 56 1W :RS
C619 470p 500V B
IC604 L4941BV +5V REG
C621 0.1
C623 220 25V
RY600
D619 1SS133T
Q607 2SC1740S-RT RELAY DRIVE
R628 680
R624 10
R626 12k
C632 220
C631 22 50V
R625 27k
D620 1SS133T
D622 MTZJ-9.1
+21V
TP7
TP8
STBY +5V
+5V
-21V
21V
STBYSV
5V
9V
R633 100
D618 1SS133T
33V
ABL
D809 RGP02-20EG23
+135V
+200V
R830 1k 1W
C821 0.0047 2kV
CN804 6P WHT
+1000V
+200V
GND
NC
H1
H2
TO C BOARD CN701
+9V
C822 22 250V
D810 RGP10GPKG23
R831 5MM
T803 FBT
HV
200V
+B
C824 33 160V
L806 JW
R836 68k
HV TO CRT
C518 470p 500V B
R510 0.47 :FPRD
TP14
D502 RGP15GPKG23
L502 3.3μH LHL08
R617 33k 2W
C517 470 25V
C514 0.1
C515 470 25V
C519 470p 500V B
R509 0.47 :FPRD
R829 56k 1/2W
TO C BOARD FV
15V
GND
FV
D503 RGP15GPKG23
L503 3.3μH LHL08
C520 470 25V
ABL
27V
L813 2.2mH
R826 1k 1/2W
R828 12k
L810 5MM
CN1401 5P
+135V
NC
GND
VM OUT
+9V
TO VM BOARD CN1015
TP15
C819 0.068 250V :MPS
R827 4.7k
+9V
CN803 1P
GND
TAB (CONTACT)
+135V
CN801 10P
+15V PULSE
GND
GND
ROT COIL
GND
FBT +15V
GND
GND
GND
V-OUT
TO D2 BOARD CN1801
JW007 5MM
+15V
JW120 10MM
C810 2.2μF 250V
L811 220μH
C812 0.68 400V
R821 47 3W
C808 0.1 400V
L805 4.7mH
C811 820p 500V
L804 HLC
TP16
R840 100
V+
V-
H-
H-
H+
H+
CN800 6P :DY
DY
H.DY
H.DY
V.DY
V.DY
R822 680 1W :RS
C829 0.47 50V
R817 1.2k 3W
R816 1k 3W
Q802 2SC4927-01 H-OUT
C806 0.1 200V
C835 1000p 500V B
T804 HDT
L803 1.9mH
C814 0.015 1.4kV
C816 1000p 2kV
C818 470p 2kV
C817 1000p 2kV
JW807 5MM
JW805 5MM
R841 1.2k
Q803 2SC2688-L H-DRIVE
R851 10k 2W PFRD
C836 100p 500V B
R819 0.47 1W :RS
C820 470p B
R820 68
JW013 5MM
R824 1.8k
JW808 5MM
JW809 5MM
Q805 DTC144ES SW
D812 FMS-3FU
C813 0.047 630V 9PP
C815 8200p 400V
R1218 5MM
D1201 MTZJ-3.9B
+21V
Q1201 DTC143TS MUTE SW
+5V
5V
R1216 470
IC1200 TDA7264 AUDIO-AMP
ROUT
-21V
LOUT
-21V
L IN
GND
R IN
CN1420 3P BLK S:MICRO
GND
GND
GND
R1213 2.2k
Q1200 2SC1740S-RT MUTE SW
R1200 4.7k
R1201 27k
C1215 0.47
C1200 0.1
C1202 0.47
C1201 0.47
C1216 2200p
C1217 2200p
-21V
R1211 3.9k
R1212 3.9k
CN1408 4P :S-MICRO
AUDIO L
AUDIO R
GND
L OUT
GND
R OUT
SP L
SP R
R1208 4.7 :RF
R1209 4.7 :RF
C1206 0.022
C1205 0.022
C1203 0.22 :MPS
C1204 0.22 :MPS
①
②
③
④
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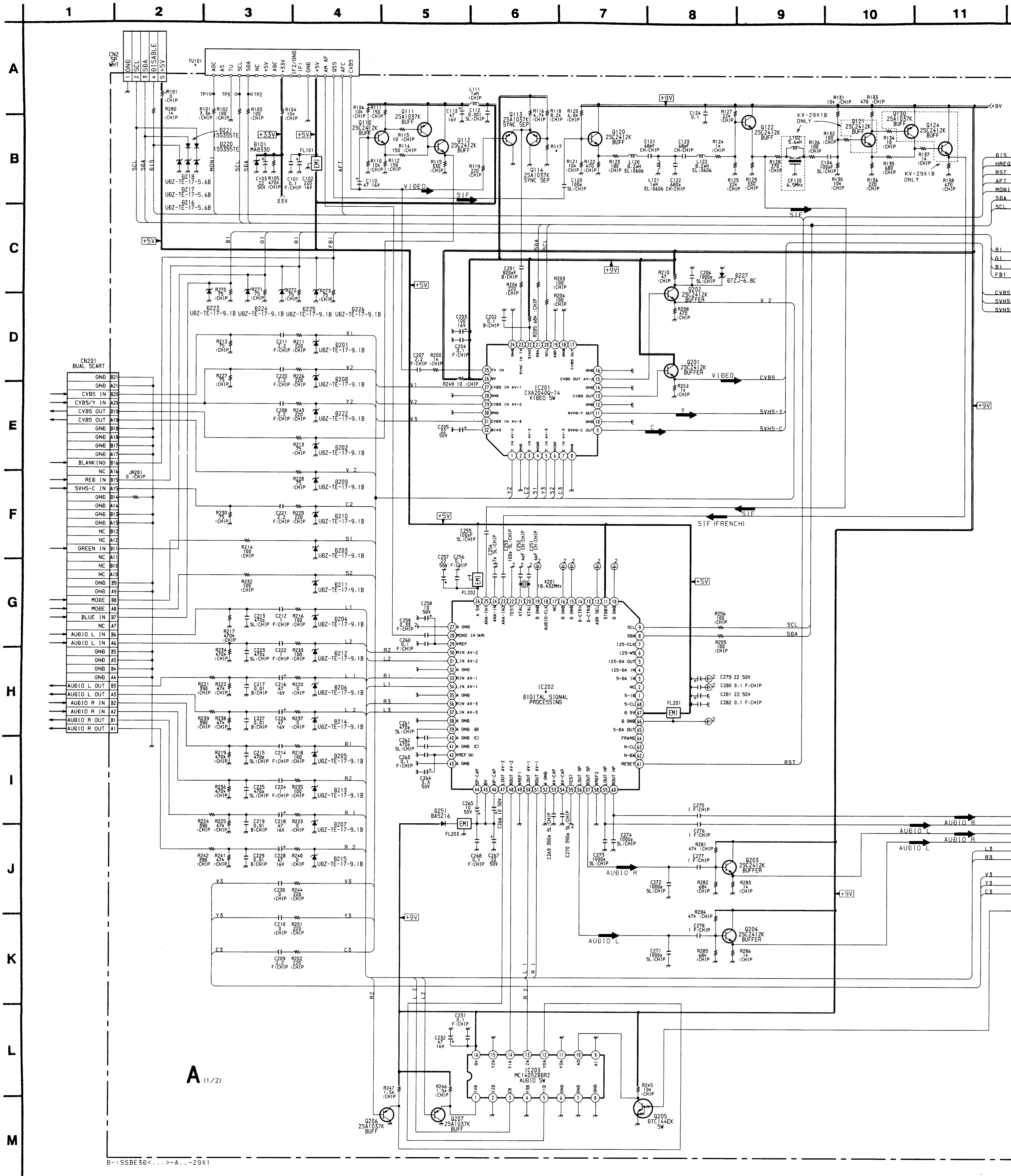
⑪

D BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q501	-0.1	0.2	-
Q502	0.1	-5.8	-
Q503	-5.8	-12.0	-12.0
Q602	72.0	7.5	72.7
Q603	0	72.0	-
Q604	0.7	-	-
Q605	0.5	-	0.3
Q606	-	-	12.0
Q607	-	12.0	-
Q800	0.2	3.1	-
Q801	0.3	17.0	-
Q802	-0.2	143.3	-
Q803	-0.6	99.8	-
Q805	-	3.6	-
Q900	-	5.4	-
Q1200	2.9	21.5	4.6
Q1201	3.4	5.0	3.0
Q1202	2.8	-	-

D BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC500	1	1.5
	2	15.0
	3	-12.3
	4	-14.0
	5	0.1
	6	15.2
	7	1.4
IC600	1	170.0
	2	-62.4
	3	-62.6
	4	-62.2
	5	-62.0
	6	-62.6
	7	-62.4
	8	-62.0
	9	-58.0
IC601	1	64.3
	2	63.0
	3	-62.5
	4	-58.6
IC602	1	135.0
	2	63.2
	3	-0.1
IC800	3	0.9
	5	1.5
	6	2.0
	7	0.2
	8	9.0
IC1200	2	21.7
	4	21.5
	5	-21.7
IC1201	1	4.0
	2	9.0
	3	4.0
	5	0.5
	8	0.5


1
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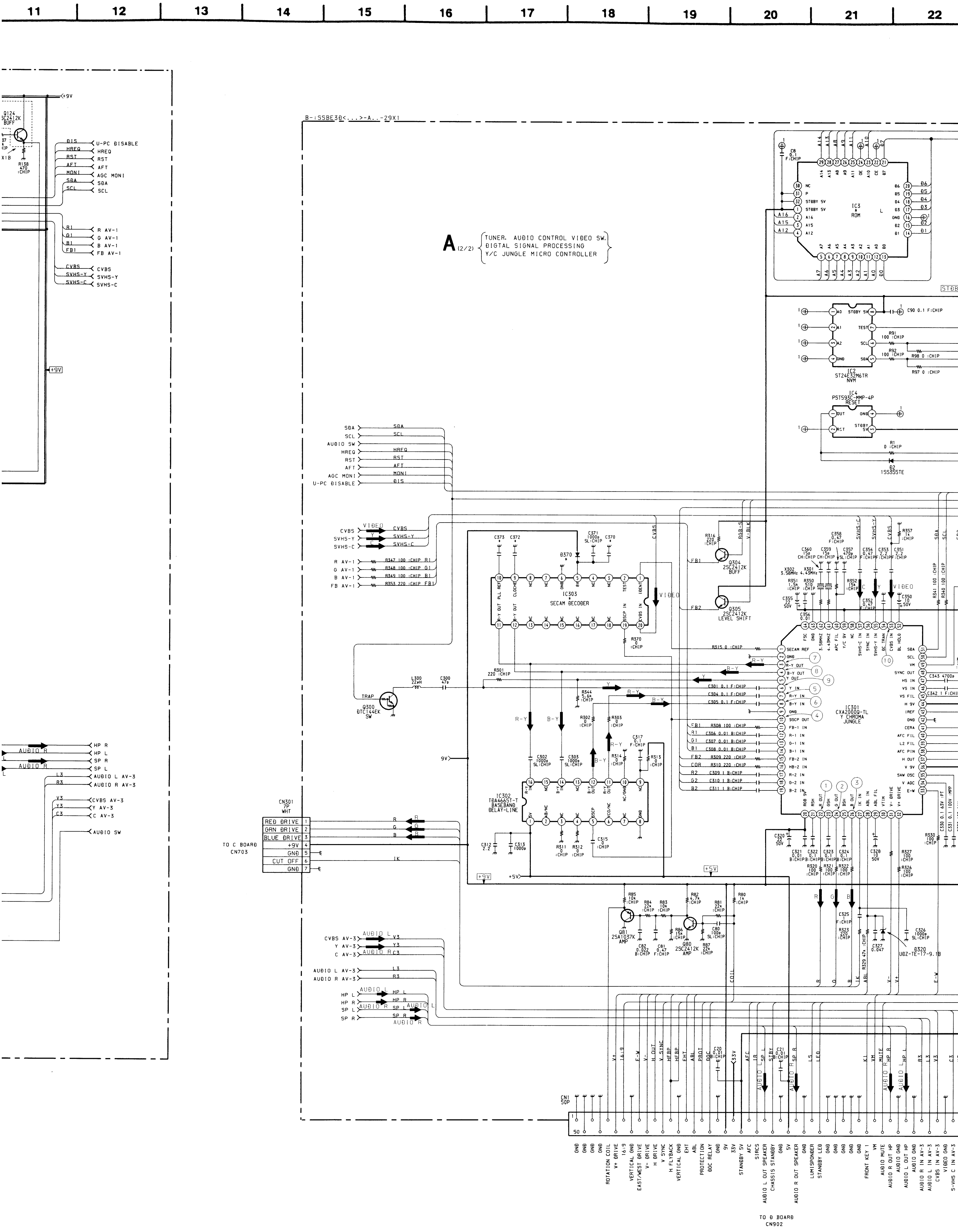
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
CN2 5P WHT
GND
SCL
SDA
DISABLE
+5V
TU101
AGC
AS
TU
SCL
SDA
NC
+5V
ADC
33V
IF2/GND
IF1
GND
AM AF
QSS
AFC
CVBS
D218 UDZ-TE-17-5.6B
D217 UDZ-TE-17-5.6B
D216 UDZ-TE-17-5.6B
D221 1SS355TE
D220 1SS355TE
D101 MA8330
+33V
+5V
FL101
Q110 2SC2412K BUFF
Q111 2SA1037K BUFF
Q112 2SC2412K BUFF
Q113 2SA1037K SYNC SEP
Q114 2SA1037K SYNC SEP
Q120 2SC2412K BUFF
Q122 2SC2412K BUFF
Q121 2SC2412K BUFF
Q130 2SA1037K BUFF
Q124 2SC2412K BUFF
KV-29X1B ONLY
CF120 6.5MHz
+9V
VIDEO
SIF
D223 UDZ-TE-17-9.1B
D224 UDZ-TE-17-9.1B
D225 UDZ-TE-17-9.1B
D226 UDZ-TE-17-9.1B
CN201 DUAL SCART
CVBS IN
CVBS/Y IN
CVBS OUT
BLANKING
RED IN
SVHS-C IN
GREEN IN
BLUE IN
MODE
AUDIO L IN
AUDIO L OUT
AUDIO R IN
AUDIO R OUT
JR201 0 :CHIP
IC201 CXA2040Q-T4 VIDEO SW
Q202 2SC2412K BUFFER
Q201 2SC2412K BUFFER
D227 DTZJ-6.8C
CVBS
SVHS-Y
SVHS-C
SIF (FRENCH)
X201 18.432MHz
FL202
IC202 DIGITAL SIGNAL PROCESSING
FL201
RST
FL203
D251 BAS216
Q203 2SC2412K BUFFER
Q204 2SC2412K BUFFER
AUDIO R
AUDIO L
IC203 MC14052BDR2 AUDIO SW
Q206 2SA1037K BUFF
Q207 2SA1037K BUFF
Q205 DTC144EK SW
A (1/2)
B-:SSBE3Ø<...>-A..-29X1

A BOARD * MARK

Model Ref. No.	29X1A	29X1B	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
C370	—	2.2UF	2.2UF	2.2UF	2.2UF	—	2.2UF	—
C372	—	0.1UF	0.1UF	0.1UF	0.1UF	—	0.1UF	—
C373	—	0.22UF	0.22UF	0.22UF	0.22UF	—	0.22UF	—
D370	—	BAS216	BAS216	BAS216	BAS216	—	BAS216	—
IC3	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FML	TMS27PC010A-15FMBW101
IC202	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15
IC303	—	TDA8395T	TDA8395T	TDA8395T	TDA8395T	—	TDA8395T	—
R13	150	—	150	150	150	150	150	150
R14	150	—	150	150	150	150	150	150
R15	150	—	150	150	150	150	150	150
R16	100	—	100	100	100	100	100	100
R17	100	—	100	100	100	100	100	100
R117	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	2.0K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)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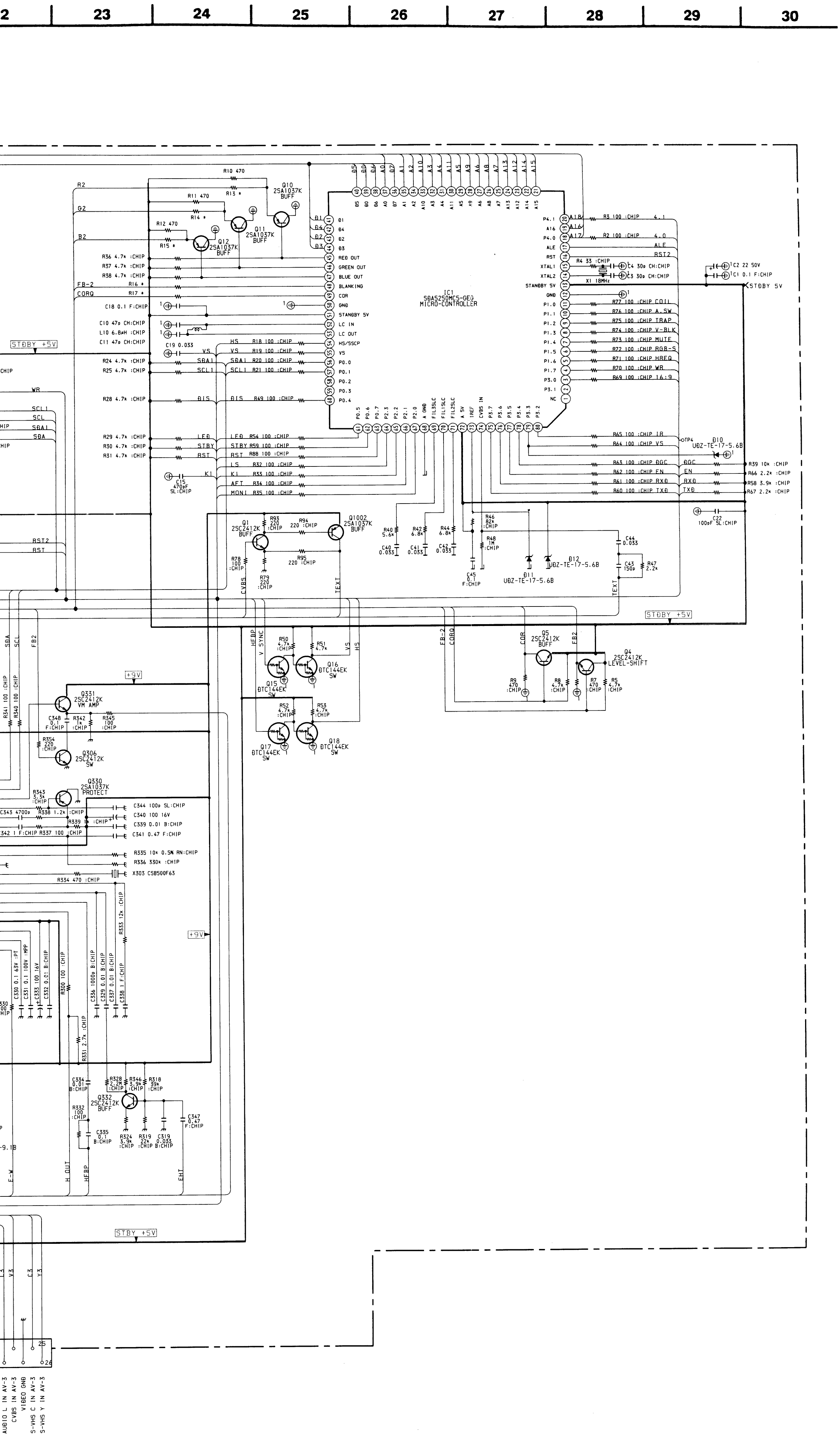
A (2/2)
TUNER, AUDIO CONTROL VIDEO SW,
DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER
B-:SSBE30<...>-A..-29X1
Q124 2SC2412K BUFF
R138 470 :CHIP
+9V
DIS U-PC DISABLE
HREQ HREQ
RST RST
AFT AFT
MONI AGC MONI
SDA SDA
SCL SCL
R1 R AV-1
G1 G AV-1
B1 B AV-1
FB1 FB AV-1
CVBS CVBS
SVHS-Y SVHS-Y
SVHS-C SVHS-C
AUDIO R
HP R
HP L
SP R
SP L
L3 AUDIO L AV-3
R3 AUDIO R AV-3
Y3 CVBS AV-3
Y3 Y AV-3
C3 C AV-3
AUDIO SW
IC3 ROM
C8 0.1 F:CHIP
STDBY 5V
IC2 ST24E32M6TR NVM
C90 0.1 F:CHIP
R91 100 :CHIP
R92 100 :CHIP
R98 0 :CHIP
R97 0 :CHIP
IC4 PST593C-MMP-4P RESET
R1 0 :CHIP
D2 1SS355TE
SDA
SCL
AUDIO SW
HREQ
RST
AFT
AGC MONI
U-PC DISABLE
CVBS
SVHS-Y
SVHS-C
VIDEO
R AV-1
G AV-1
B AV-1
FB AV-1
R347 100 :CHIP R1
R348 100 :CHIP G1
R349 100 :CHIP B1
R353 220 :CHIP FB1
IC303 SECAM DECODER
D370
C373
C372
C371 1000p SL:CHIP
C370
R370 0 :CHIP
Q304 2SC2412K BUFF
Q305 2SC2412K LEVEL SHIFT
R316 220 :CHIP
RGB-S
V-BLK
FB1
FB2
X302 3.58MHz
X301 4.43MHz
IC301 CXA2000Q-TL Y CHROMA JUNGLE
R315 0 :CHIP
TRAP
Q300 DTC144EK SW
L300 22µH
C300 47p
R301 220 :CHIP
R344 5.6k :CHIP
R302 0 :CHIP
R303 0 :CHIP
C317 0.1 F:CHIP
R314 0 :CHIP
R313 0 :CHIP
C302 1000p SL:CHIP
C303 1000p SL:CHIP
IC302 TDA4665T-T BASEBAND DELAY-LINE
C312 2.2
C313 1000p
R311 0 :CHIP
R312 0 :CHIP
C315 :CHIP
R-Y
B-Y
Y
9V
+5V
+9V
CN301 7P WHT
RED DRIVE 1
GRN DRIVE 2
BLUE DRIVE 3
+9V 4
GND 5
CUT OFF 6
GND 7
TO C BOARD CN703
R
G
B
IK
C301 0.1 F:CHIP
C304 0.1 F:CHIP
C305 0.1 F:CHIP
R308 100 :CHIP
C306 0.01 B:CHIP
C307 0.01 B:CHIP
C308 0.01 B:CHIP
R309 220 :CHIP
R310 220 :CHIP
C309 1 B:CHIP
C310 1 B:CHIP
C311 1 B:CHIP
COR
R2
G2
B2
C320 22 50V
C321 0.01 B:CHIP
C322 0.1 B:CHIP
C323 0.1 B:CHIP
C324 0.1 B:CHIP
R320 100 :CHIP
R321 100 :CHIP
R322 100 :CHIP
C328 10 50V
R327 100 :CHIP
R326 100 :CHIP
R330 100 :CHIP
C330 0.1 63V PT
C331 0.1 100V MPP
C343 4700p
C342 1 F:CHIP
R341 100 :CHIP
R340 100 :CHIP
C350 10 50V
R357 1k :CHIP
C325 1 F:CHIP
R323 220 :CHIP
R329 47k :CHIP
C327 0.047
C326 1000p SL:CHIP
D320 UDZ-TE-17-9.1B
ABL
E-W
V-
V+
IK
COIL
Q81 2SA1037K AMP
Q80 2SC2412K AMP
R85 10k :CHIP
R84 22k :CHIP
R83 10k :CHIP
R82 4.7k :CHIP
R81 22k :CHIP
R80 1k :CHIP
R86 15k :CHIP
C82 0.022 B:CHIP
C81 0.47 F:CHIP
C80 100p SL:CHIP
R87 22k :CHIP
CVBS AV-3
Y AV-3
C AV-3
AUDIO L
AUDIO R
AUDIO L AV-3
AUDIO R AV-3
HP L
HP R
SP L
SP R
C20 0.01 B:CHIP
C21 0.01 B:CHIP
33V
CN1 50P
GND
ROTATION COIL
V+ DRIVE
16:9
VERTICAL GND
EAST/WEST DRIVE
V- DRIVE
H DRIVE
V SYNC
H FLYBACK
VERTICAL EHT
ABL
PROTECTION
DGC RELAY
9V
33V
STANDBY 5V
AFC
SIRCS
AUDIO L OUT SPEAKER
CHASSIS STANDBY
5V
AUDIO R OUT SPEAKER
LUMISPONDER
STANDBY LED
FRONT KEY 1
VM
AUDIO MUTE
AUDIO R OUT HP
AUDIO GND
AUDIO L OUT HP
AUDIO R IN AV-3
AUDIO L IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS-C IN AV-3
TO D BOARD CN902


22
23
24
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IC1
SDA5250MC5-GEG
MICRO-CONTROLLER
Q10 2SA1037K BUFF
Q11 2SA1037K BUFF
Q12 2SA1037K BUFF
Q1 2SC2412K BUFF
Q1002 2SA1037K BUFF
Q5 2SC2412K BUFF
Q4 2SC2412K LEVEL-SHIFT
Q15 DTC144EK SW
Q16 DTC144EK SW
Q17 DTC144EK SW
Q18 DTC144EK SW
Q331 2SC2412K VM AMP
Q306 2SC2412K SW
Q330 2SA1037K PROTECT
Q332 2SC2412K BUFF
D10 UDZ-TE-17-5.6B
D11 UDZ-TE-17-5.6B
D12 UDZ-TE-17-5.6B
X1 18MHz
X303 CSB500F63
STBY +5V
STBY 5V
+9V
AUDIO L IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS C IN AV-3
S-VHS Y IN AV-3

A (1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC201	13	4.4
	15	4.4
	20	3.5
	21	2.7
	22	4.9
	23	4.4
	24	0
	25	4.4
	26	8.8
	32	4.4
IC202	4	2.8
	6-7	0.1
	8	3.0
	9	3.6
	11	4.7
	13	4.7
	20-21	2.4
	23	0.2
	25	1.5
	26	4.8
	28	3.8
	29	2.6
	39-42	3.8
	44	7.1
	45	8.0
	46	7.1
	47-48	3.8
	53-54	3.8

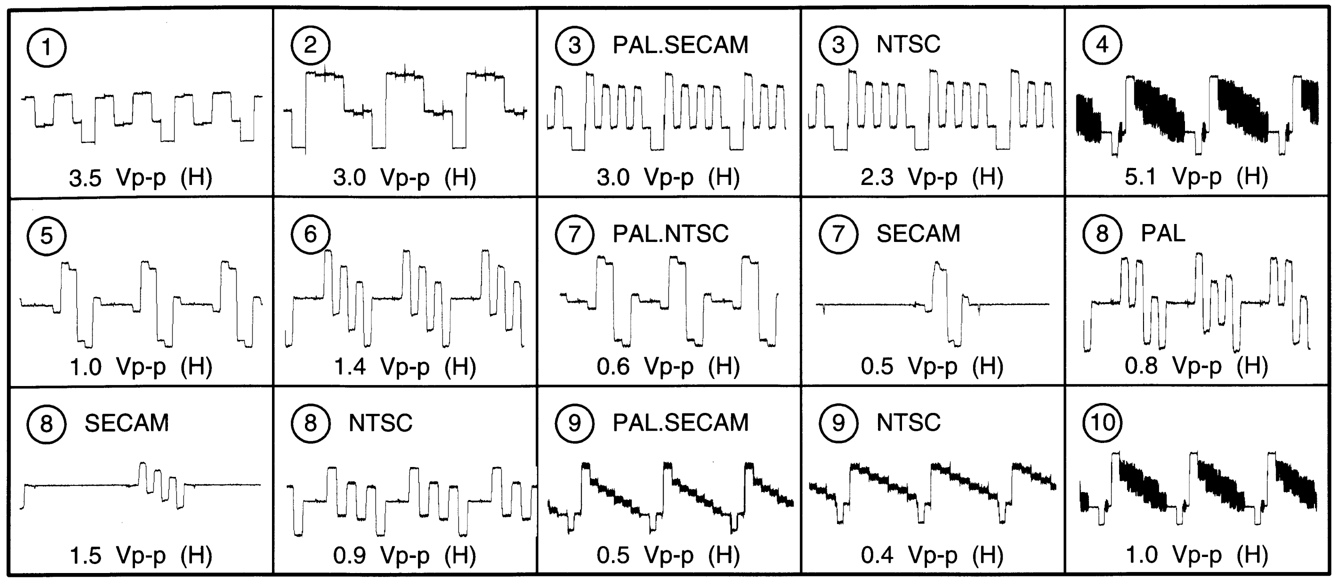
A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q1	3.7	4.8	3.1
Q4	0.1	4.8	-
Q5	0.7	4.8	4.0
Q15	-	4.3	-
Q16	4.3	0.2	-
Q17	0.4	3.5	-
Q18	3.5	0.7	-
Q80	2.6	2.2	-
Q81	2.4	-	3.0
Q304	-	4.8	-
Q305	-	4.8	-
Q330	4.5	-	5.1
Q331	6.3	8.8	5.7
Q332	3.1	8.8	2.5
Q1001	4.4	-	-

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q110	1.8	8.2	1.2
Q112	1.5	8.8	0.8
Q113	1.8	-	-
Q114	5.4	6.0	-
Q120	84.3	8.8	3.7
Q121	1.5	5.4	0.9
Q122	5.4	8.8	4.7
Q124	-	8.8	-
Q201	4.4	8.8	3.7
Q202	4.4	8.8	3.7

WAVEFORMS A BOARD



A (2/2) BOARD IC VOLTAGE TABLE

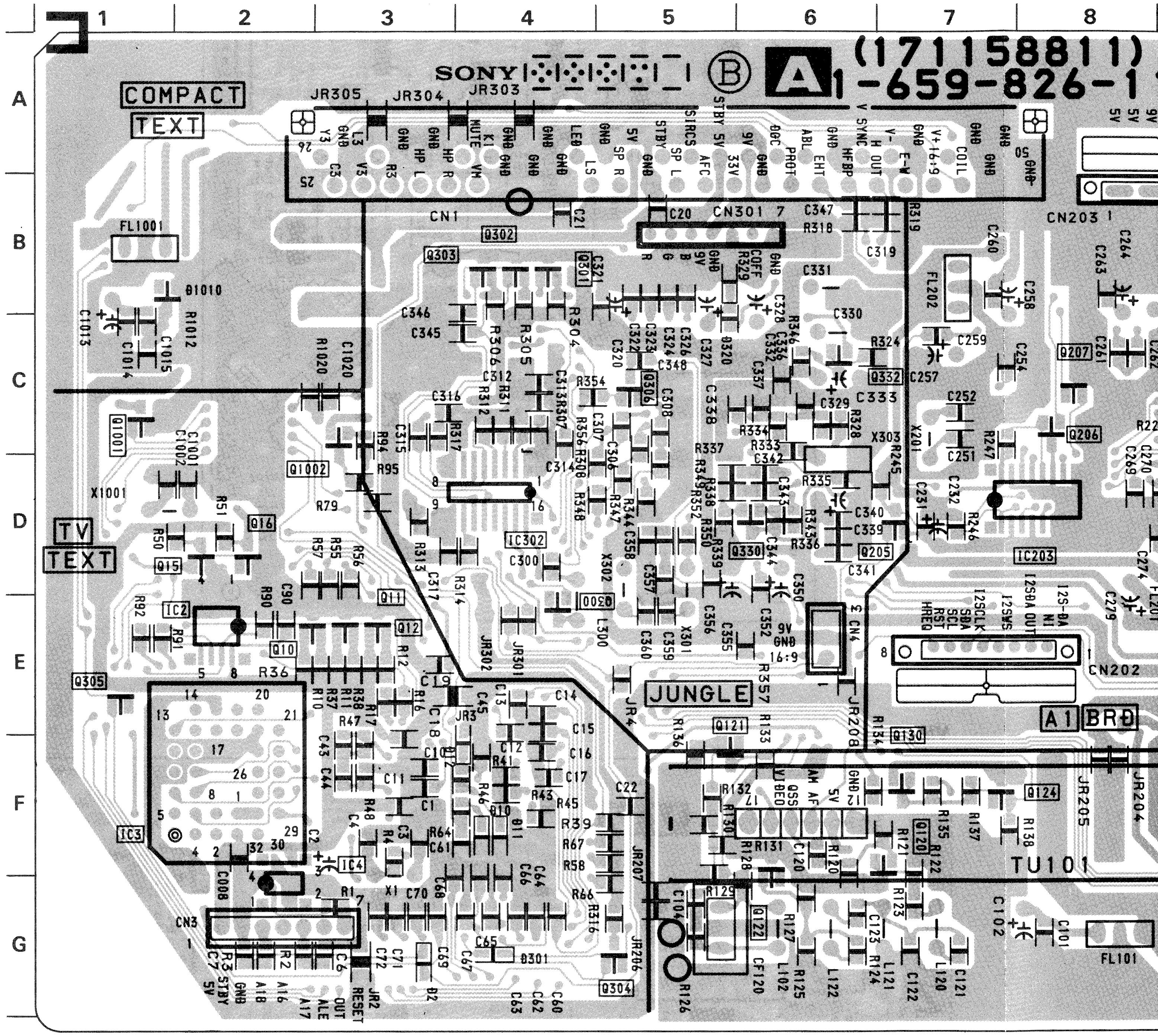
IC Voltage Table

Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC1	2	3.6	IC301	5	3.6	IC301	61	5.0
	3-4	4.8		6	5.0		62	7.6
	5	0.5		7-8	5.4	IC302	1	4.8
	7	4.8		10	0.6		5	0.7
	9	4.8		12-14	5.4		9	4.8
	11	2.4		16	4.0		11-12	3.0
	13	4.8		17-19	5.4		14	1.3
	14-15	2.3		20	8.8		16	1.3
	16-17	4.8		22-23	2.2	IC303	5	8.0
	48	4.0		24	2.0		3.2	10
	51	4.8		25	2.4		11	5.6
	52-53	2.4		26	2.0		0	19
	54	0.7		27	4.0		20	3.7
	55	0.2		28	6.6		4	0.2
	56-57	4.8		29	8.8		5	0.7
	58	2.8		31-33	3.0	IC1001	4	0.2
	59	3.5		34	4.0		5	0.7
	60	2.4		35	4.6		6	1.7
	62	0.7		36	8.8		7	1.8
	63	4.4		37	3.1		10	0.4
	65	4.8		38	3.4		11-12	4.8
	66	2.1		39	5.3		16	4.8
	67	2.0		40	4.2		17	0
	69-71	2.3		41	2.3		21	4.8
	72	4.8		43	1.7		23	3.0
	73	1.5		44	8.8		25	4.8
	74	1.2		45	2.5		56	0
	75-77	4.8		46	3.9		61	1.3
	79	0.2		47	3.0		62-63	1.4
	80	4.8		48	4.4		64	0
IC2	5-8	4.8		49	6.3		66	4.6
IC3	1	4.8		50-51	0.1		67	4.7
	31-32	4.8		53	3.9		68	4.0
IC4	1	4.8		54	5.0			
	3	4.8		55-56	4.2			
IC301	1	1.5		58-59	8.8			
	3-4	5.6		60	5.3			

A

TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER

A Board <Conductor Side>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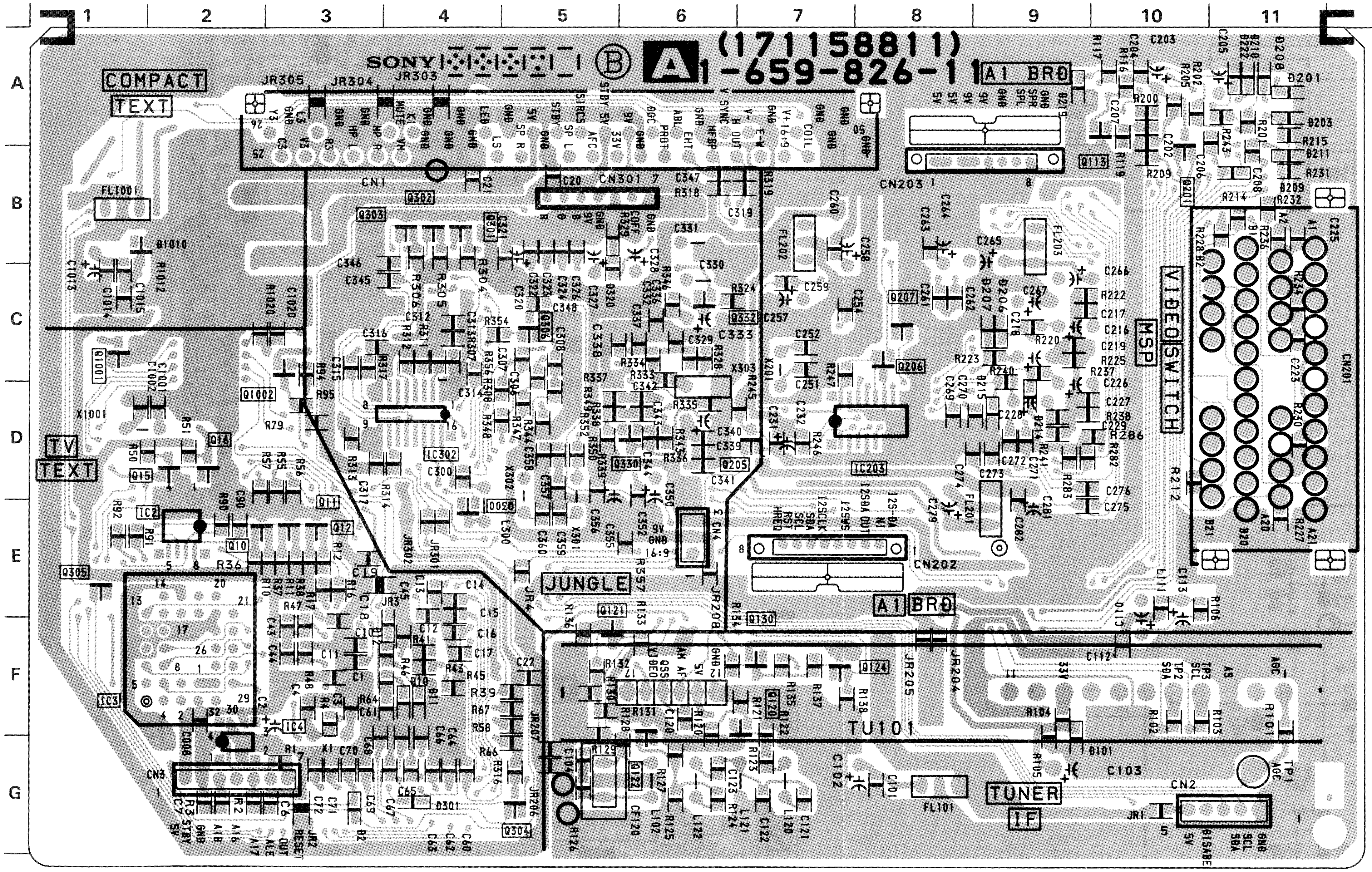
3
4
5
6
7
8
A
B
C
D
E
F
G
SONY
A (171158811)
1-659-826-1
COMPACT TEXT
TV TEXT
JUNGLE
A1 BRD
TU101
CN1
CN301
CN203
CN202
CN3
JR305
JR304
JR303
IC1
IC2
IC3
IC4
IC203
IC302
FL1001
FL101
FL202
X1001
X301
X302
X303
X201
Q302
Q303
Q301
Q306
Q330
Q332
Q205
Q206
Q207
Q1001
Q1002
Q10
Q11
Q12
Q15
Q16
Q120
Q121
Q122
Q124
Q130
Q304
Q305

A TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER

A Board <Conductor Side>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9
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11
A
B
C
D
E
F
G
(171158811)
1-659-826-11
SONY
A
A1 BRD
COMPACT
TEXT
TV
TEXT
JUNGLE
MSP
VIDEO SWITCH
TUNER
IF
TU101
CN1
CN301
CN201
CN202
CN203
CN2
CN3
JR305
JR304
JR303
IC2
IC3
IC4
IC203
IC302
FL1001
FL201
FL202
FL203
FL101
X1001
X301
Q1001
Q1002
Q302
Q303
Q304
Q330
Q332
Q205
Q206
Q207
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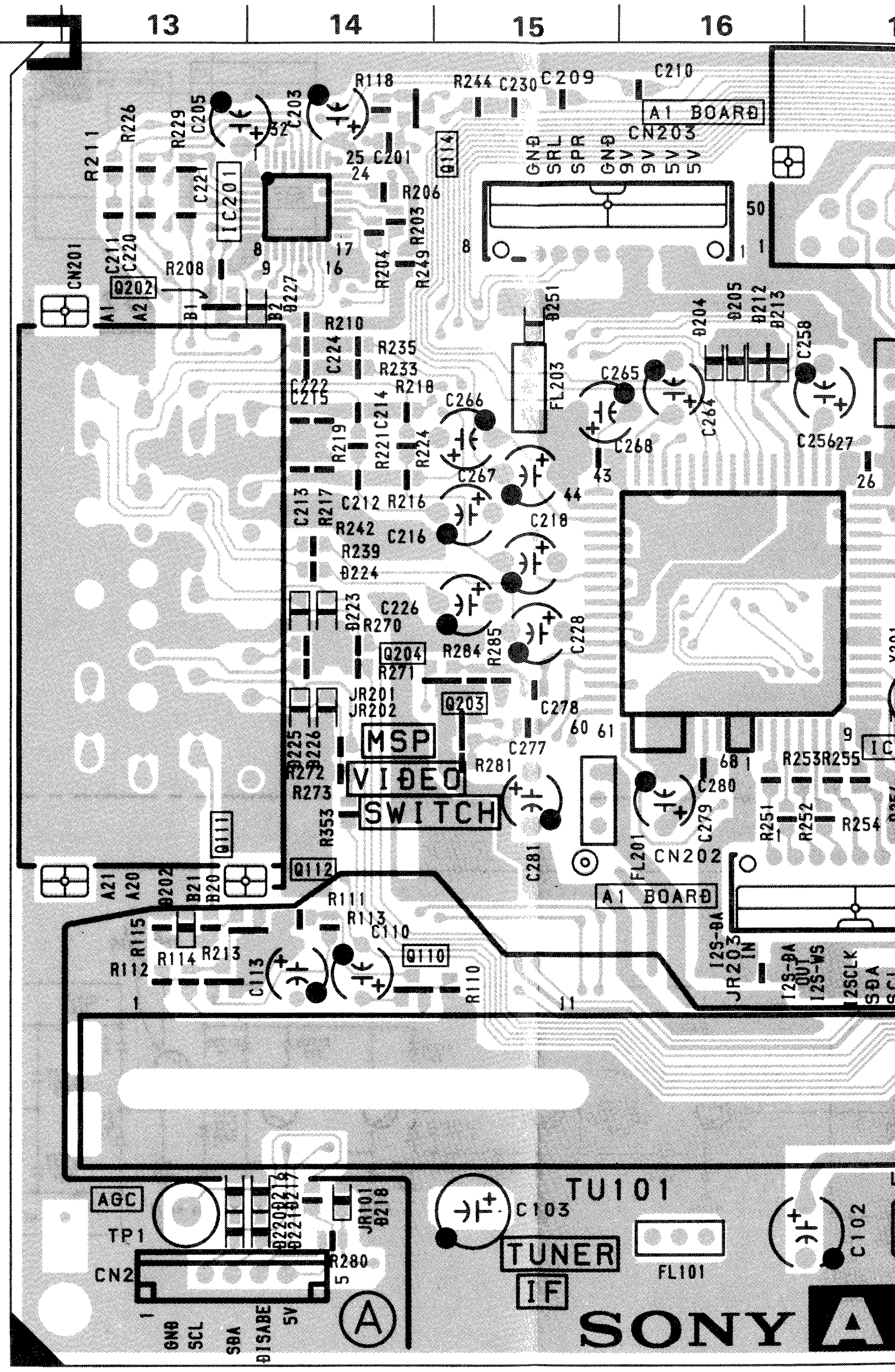
Q121
Q122
Q124
Q130
Q305
Q10
Q11
Q12
Q15
Q16

A Board <Component Side>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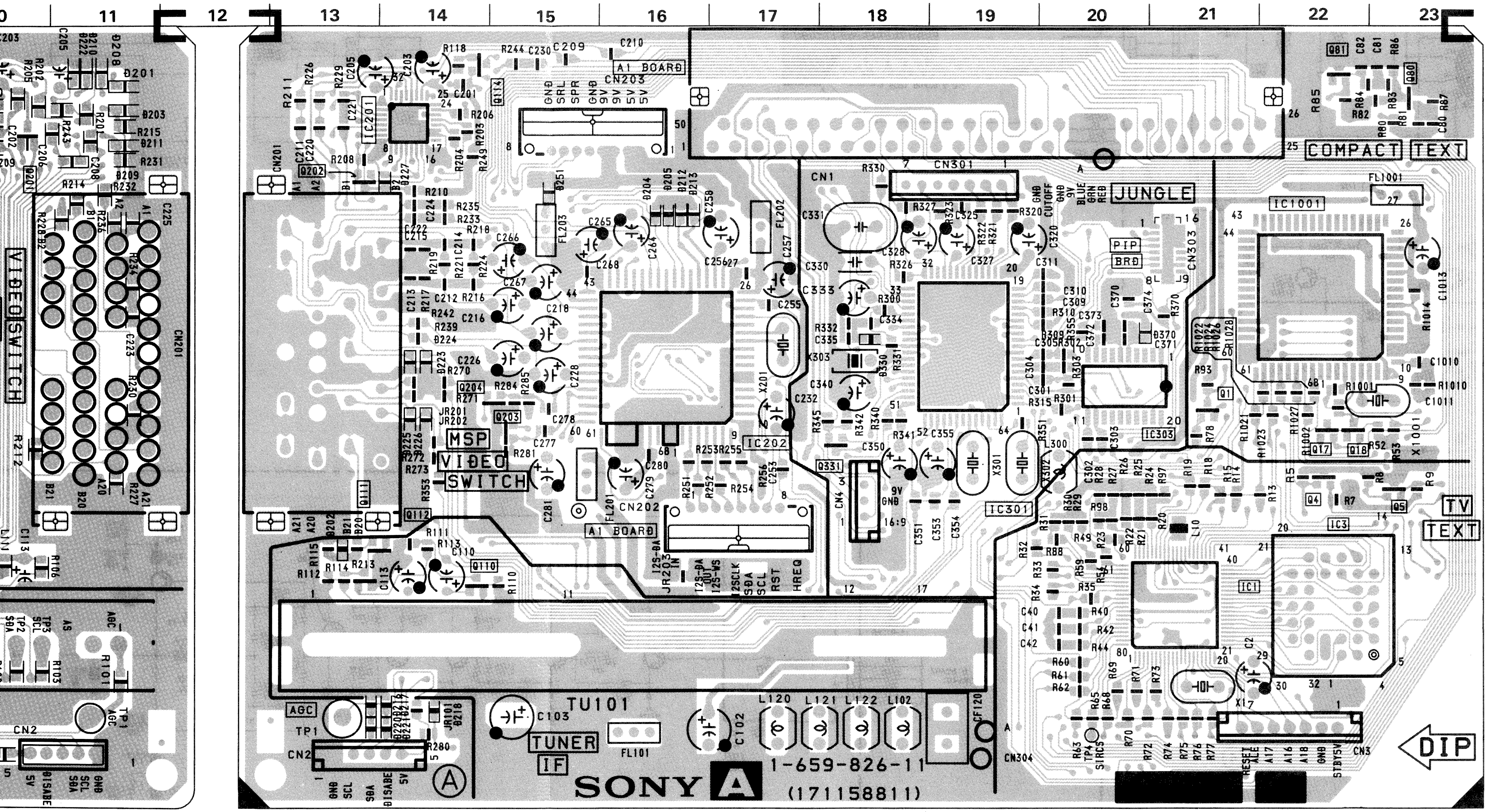
MSP
VIDEO
SWITCH
TUNER
IF
TU101
SONY
IC201
CN201
CN202
CN203
CN2
Q113
Q202
Q203
Q204
Q110
Q112
Q111
FL203
FL201
FL101
AGC
TP1
C103
C102

A Board <Component Side>


11
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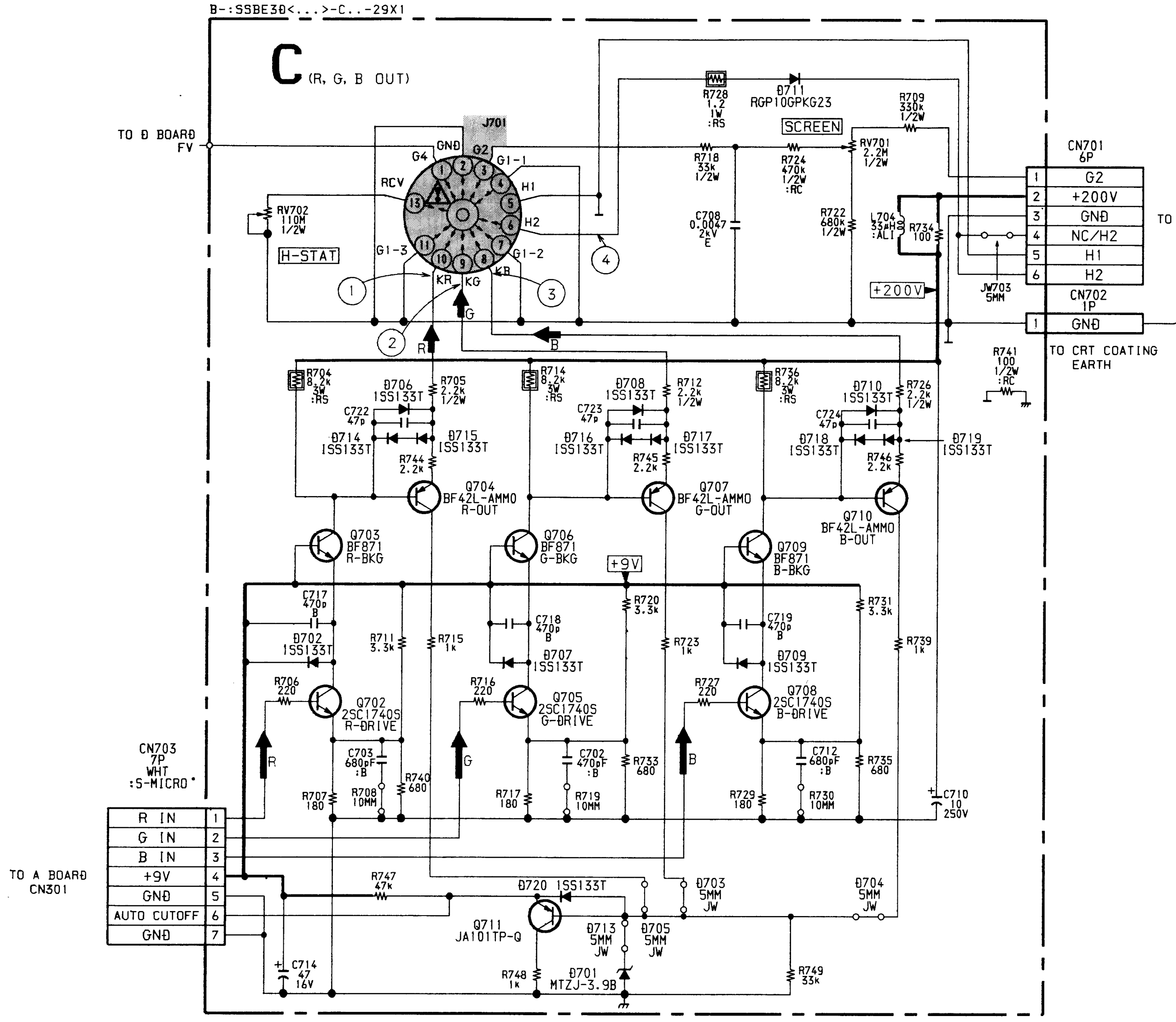
23
VIDEO SWITCH
CN201
A1 BOARD
CN203
CN301
JUNGLE
COMPACT TEXT
PIP
BRD
IC1001
MSP
VIDEO SWITCH
IC202
IC301
IC303
IC1
IC3
TV TEXT
CN202
CN304
CN3
DIP
TU101
TUNER
IF
AGC
CN2
SONY A
1-659-826-11
(171158811)

A BOARD

IC	
IC1	F-21
IC2	E-2
IC3	F-2
IC4	G-2
IC201	A-14
IC202	C-16
IC203	D-8
IC301	C-19
IC302	D-4
IC303	D-21
TRANSISTOR	
Q1	D-21
Q4	E-22
Q5	E-23
Q10	E-2
Q11	E-3
Q15	D-2
Q16	D-2
Q17	D-22
Q18	D-23
Q80	A-23
Q81	A-22
Q110	F-14
Q111	E-14
Q112	E-14
Q113	A-10
Q114	A-14
Q120	F-7
Q121	F-5
Q122	F-6
Q124	F-7
Q130	F-7
Q201	B-10
Q202	B-13
Q203	D-15
Q204	D-15
Q205	D-7
Q206	C-8
Q207	C-8
Q300	E-4
Q304	G-5
Q305	E-1
Q306	C-5
Q330	D-6
Q331	D-18
Q332	C-6
Q1002	C-3
DIODE	
D2	G-3
D10	F-10
D11	F-10
D12	F-4
D101	F-9
D201	A-11
D202	E-13
D203	A-11
D204	B-16
D205	B-16
D206	C-9
D207	C-9
D208	A-11
D209	B-11
D210	A-11
D211	B-11
D212	B-16
D213	B-16
D214	D-9
D215	D-9
D216	G-14
D217	G-14
D218	G-14
D220	G-14
D221	D-14
D222	D-14
D223	D-14
D224	D-14
D225	D-14
D226	D-14
D227	B14
D251	B-15
D320	C-5
D370	C-21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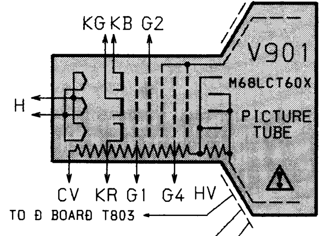
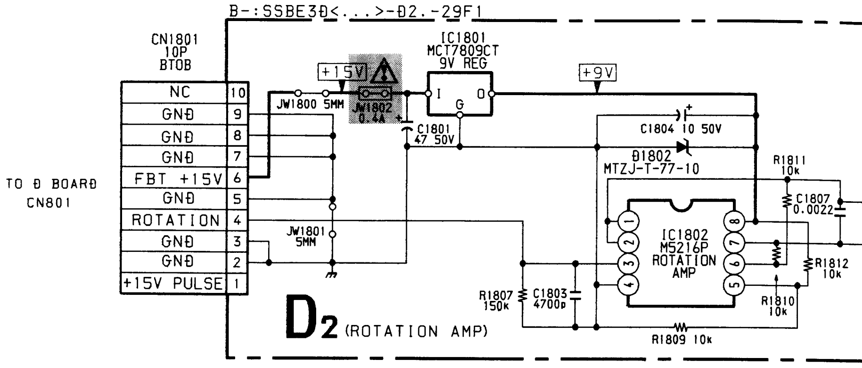
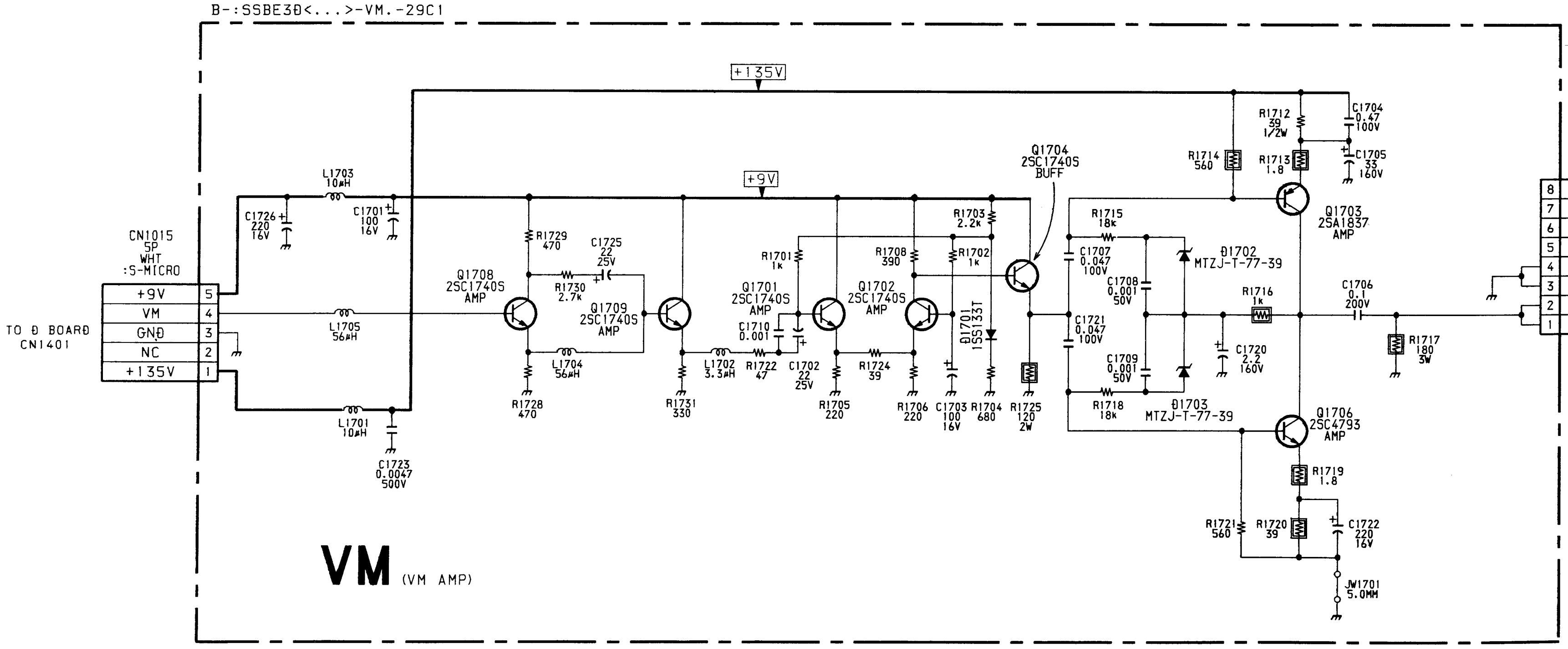
C (R, G, B OUT)
TO D BOARD FV
J701
GND
G4
G2
G1-1
RCV
H1
H2
G1-3
G1-2
KR
KG
KB
RV702 110M 1/2W
H-STAT
D711 RGP10GPKG23
R728 1.2 1W :RS
R709 330k 1/2W
SCREEN
RV701 2.2M 1/2W
R718 33k 1/2W
R724 470k 1/2W :RC
C708 0.0047 2kV
R722 680k 1/2W
L704 33µH :ALI
R734 100
+200V
JW703 5MM
CN701 6P
G2
+200V
GND
NC/H2
H1
H2
TO D BOARD CN804
CN702 1P
GND
TO CRT COATING EARTH
TAB CONNECTOR
R741 100 1/2W :RC
R704 8.2k 3W :RS
D706 1SS133T
R705 2.2k 1/2W
C722 47p
D714 1SS133T
D715 1SS133T
R744 2.2k
Q704 BF42L-AMMO R-OUT
R714 8.2k 3W :RS
D708 1SS133T
R712 2.2k 1/2W
C723 47p
D716 1SS133T
D717 1SS133T
R745 2.2k
Q707 BF42L-AMMO G-OUT
R736 8.2k 3W :RS
D710 1SS133T
R726 2.2k 1/2W
C724 47p
D718 1SS133T
D719 1SS133T
R746 2.2k
Q710 BF42L-AMMO B-OUT
Q703 BF871 R-BKG
Q706 BF871 G-BKG
Q709 BF871 B-BKG
+9V
C717 470p :B
D702 1SS133T
R711 3.3k
R715 1k
C718 470p :B
D707 1SS133T
R720 3.3k
R723 1k
C719 470p :B
D709 1SS133T
R731 3.3k
R739 1k
R706 220
Q702 2SC1740S R-DRIVE
R716 220
Q705 2SC1740S G-DRIVE
R727 220
Q708 2SC1740S B-DRIVE
C703 680pF :B
R740 680
R707 180
R708 10MM
R717 180
R719 10MM
C702 470pF :B
R733 680
R729 180
R730 10MM
C712 680pF :B
R735 680
C710 10 250V
CN703 7P WHT :S-MICRO
R IN
G IN
B IN
+9V
GND
AUTO CUTOFF
GND
TO A BOARD CN301
R747 47k
D720 1SS133T
Q711 JA101TP-Q
D713 5MM JW
D705 5MM JW
D703 5MM JW
D704 5MM JW
C714 47 16V
R748 1k
D701 MTZJ-3.9B
R749 33k


KG KB G2
V901
M68LCT60X
PICTURE TUBE
H
CV KR G1 G4 HV
TO D BOARD T803


B-:SSBE3D<...>-D2.-29F1
CN1801 10P BTOB
NC
GND
GND
GND
FBT +15V
GND
ROTATION
GND
GND
+15V PULSE
TO D BOARD CN801
+15V
JW1800 5MM
JW1802 0.4A
IC1801 MCT7809CT 9V REG
C1801 47 50V
+9V
C1804 10 50V
D1802 MTZJ-T-77-10
R1811 10k
C1807 0.0022
JW1801 5MM
IC1802 M5216P ROTATION AMP
R1812 10k
R1807 150k
C1803 4700p
R1810 10k
R1809 10k
D2 (ROTATION AMP)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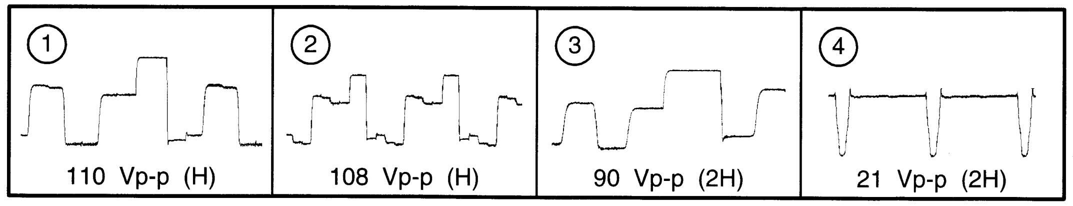
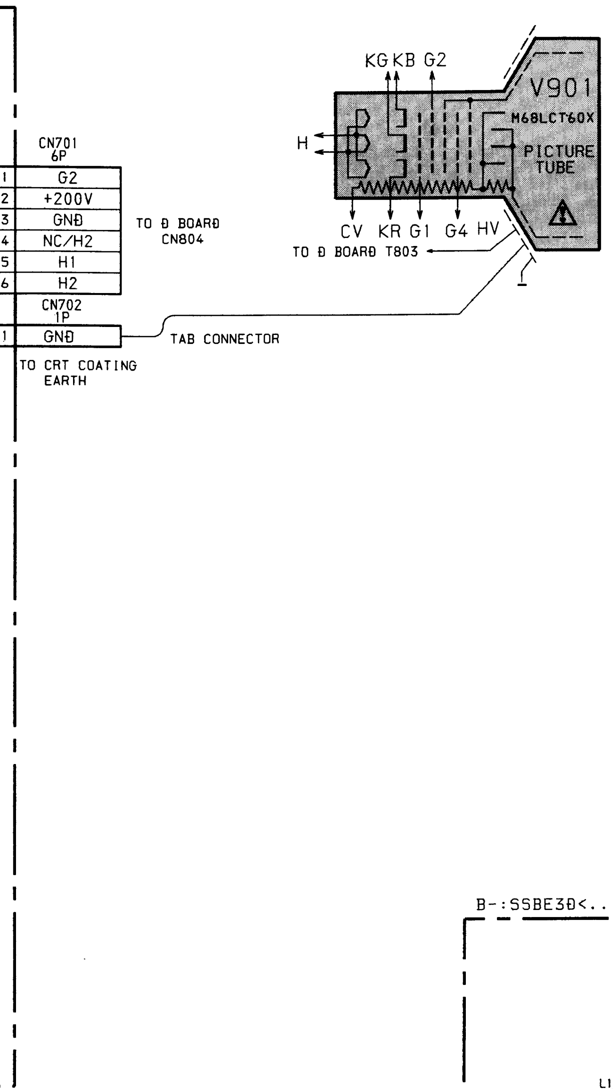
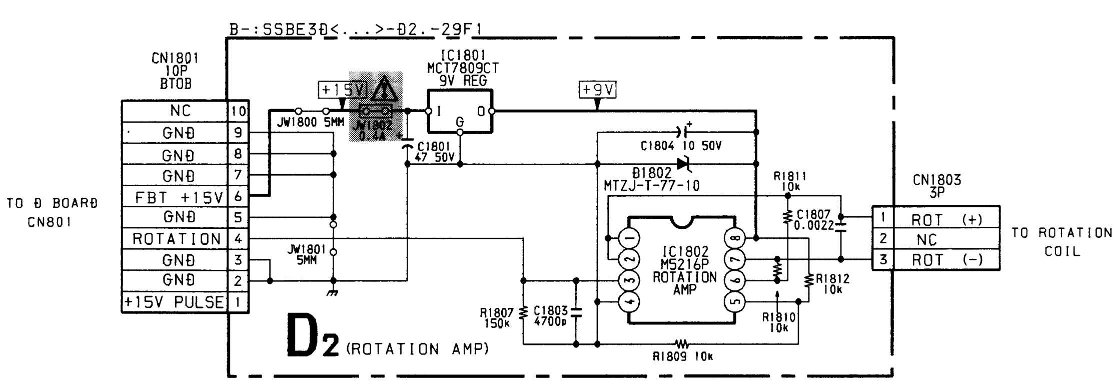
+135V
+9V
CN1015 5P WHT :S-MICRO
+9V
VM
GND
NC
+135V
TO D BOARD CN1401
L1703 10µH
C1726 220 16V
C1701 100 16V
L1705 56µH
L1701 10µH
C1723 0.0047 500V
R1729 470
C1725 22 25V
Q1708 2SC1740S AMP
R1730 2.7k
Q1709 2SC1740S AMP
L1704 56µH
R1728 470
R1731 330
R1701 1k
Q1701 2SC1740S AMP
C1710 0.001
L1702 3.3µH
R1722 47
C1702 22 25V
R1705 220
R1708 390
Q1702 2SC1740S AMP
R1724 39
R1706 220
C1703 100 16V
R1703 2.2k
R1702 1k
D1701 1SS133T
R1704 680
R1725 120 2W
Q1704 2SC1740S BUFF
R1715 18k
C1707 0.047 100V
C1708 0.001 50V
C1721 0.047 100V
C1709 0.001 50V
R1718 18k
D1702 MTZJ-T-77-39
D1703 MTZJ-T-77-39
R1716 1k
C1720 2.2 160V
R1712 39 1/2W
C1704 0.47 100V
R1714 560
R1713 1.8
C1705 33 160V
Q1703 2SA1837 AMP
C1706 0.1 200V
R1717 180 3W
Q1706 2SC4793 AMP
R1719 1.8
R1721 560
R1720 39
C1722 220 16V
JW1701 5.0MM
VM (VM AMP)

WAVEFORMS C BOARD



C [R, G, B OUT] **VM** [V


CN701 6P
1 G2
2 +200V
3 GND
4 NC/H2
5 H1
6 H2
TO D BOARD CN804
CN702 1P
1 GND
TAB CONNECTOR
TO CRT COATING EARTH
KG KB G2
H
V901
M68LCT60X
PICTURE TUBE
CV KR G1 G4 HV
TO D BOARD T803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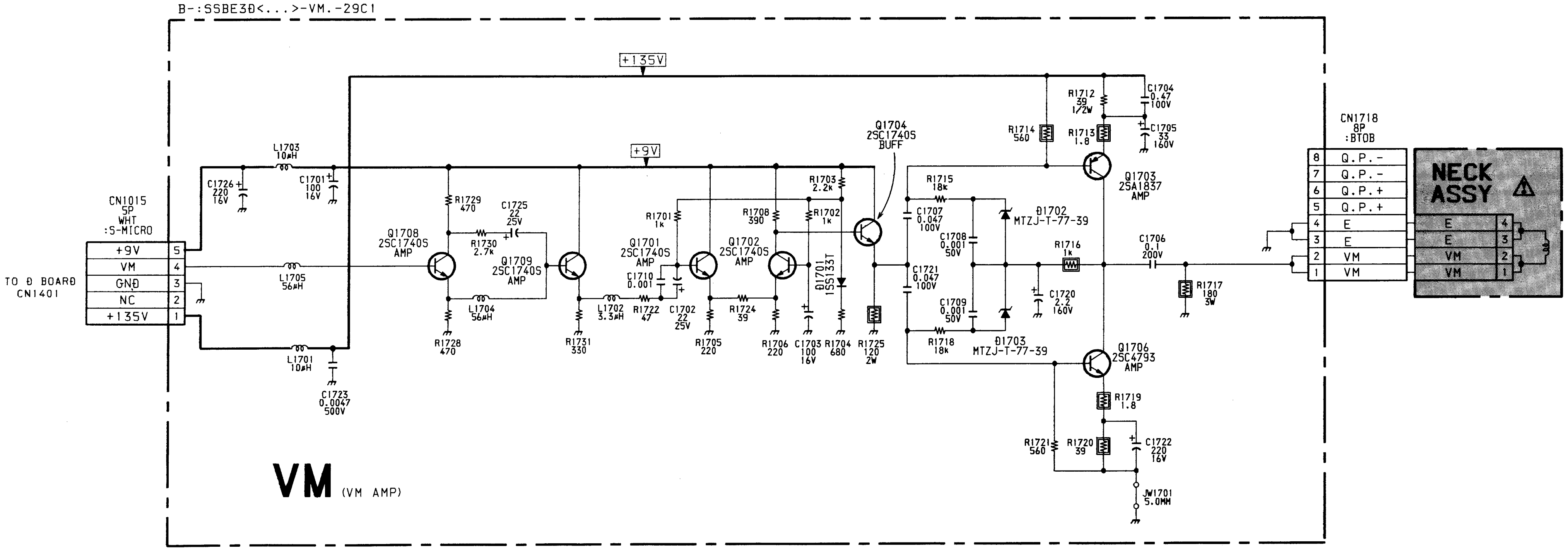
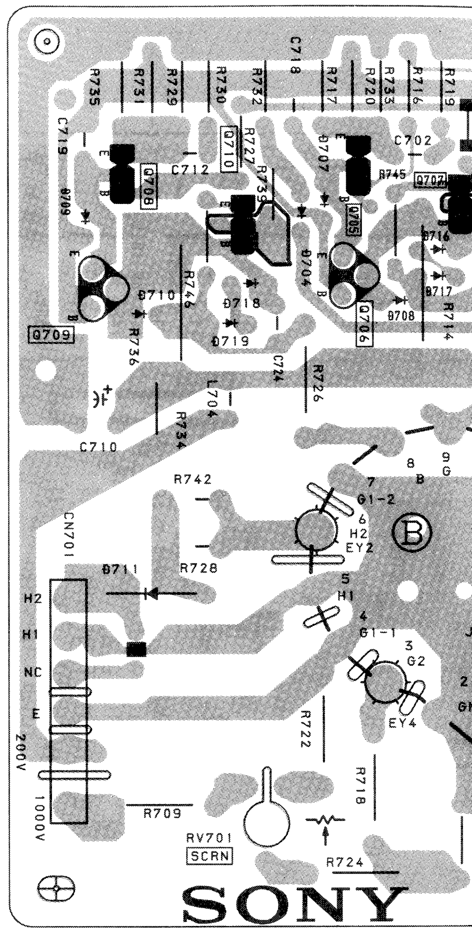
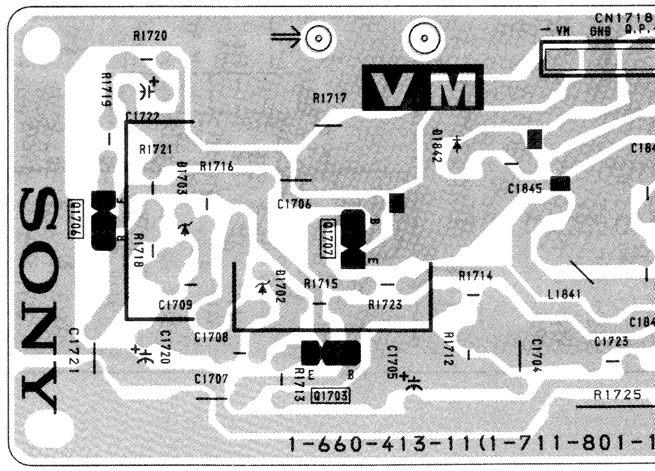
CN1801 10P BTOB
NC 10
GND 9
GND 8
GND 7
FBT +15V 6
GND 5
ROTATION 4
GND 3
GND 2
+15V PULSE 1
TO D BOARD CN801
+15V
JW1800 5MM
JW1802 0.4A
IC1801 MCT7809CT 9V REG
C1801 47 50V
+9V
C1804 10 50V
D1802 MTZJ-T-77-10
JW1801 5MM
IC1802 M5216P ROTATION AMP
R1811 10k
C1807 0.0022
R1812 10k
R1810 10k
R1807 150k
C1803 4700p
R1809 10k
CN1803 3P
ROT (+)
NC
ROT (-)
TO ROTATION COIL
D2 (ROTATION AMP)


B-:SSBE3D<...>-VM.-29C1
+135V
+9V
TO D BOARD CN1401
CN1015 5P WHT :S-MICRO
+9V 5
VM 4
GND 3
NC 2
+135V 1
L1703 10µH
C1726 220 16V
C1701 100 16V
L1705 56µH
L1701 10µH
C1723 0.0047 500V
Q1708 2SC1740S AMP
R1729 470
R1730 2.7k
C1725 22 25V
Q1709 2SC1740S AMP
L1704 56µH
R1728 470
R1731 330
L1702 3.3µH
R1722 47
Q1701 2SC1740S AMP
R1701 1k
C1710 0.001
C1702 22 25V
R1708 390
Q1702 2SC1740S AMP
R1724 39
R1705 220
R1703 2.2k
R1702 1k
D1701 1SS133T
R1706 220
C1703 100 16V
R1704 680
R1725 120 2W
Q1704 2SC1740S BUFF
R1715 18k
C1707 0.047 100V
C1708 0.001 50V
C1721 0.047 100V
C1709 0.001 50V
R1718 18k
D1702 MTZJ-T-77-39
D1703 MTZJ-T-77-39
R1716 1k
C1720 2.2 160V
R1712 39 1/2W
C1704 0.47 100V
R1714 560
R1713 1.8
C1705 33 160V
Q1703 2SA1837 AMP
C1706 0.1 200V
R1717 180 3W
Q1706 2SC4793 AMP
R1719 1.8
R1721 560
R1720 39
C1722 220 16V
JW1701 5.0MM
CN1718 8P :BTOB
8 Q.P.-
7 Q.P.-
6 Q.P.+
5 Q.P.+
4 E
3 E
2 VM
1 VM
NECK ASSY
E 4
E 3
VM 2
VM 1
VM (VM AMP)

C Board


C718
R735 R731 R729 R730 R732 R717 R720 R716 R719
C719
C702
C712
R745
D709
D707
D706
Q710 Q708
R727
R733
R746
D710
D718
D719
D716
D717
D708
R714
Q709
R736
L704
C710
R742
R734
R726
C724
CN701
D711
R728
H2
H1
NC
E
200V
1000V
G1-2
H2
EY2
H1
G1-1
G2
EY4
R722
R718
R709
RV701 SCRN
R724
SONY

VM Board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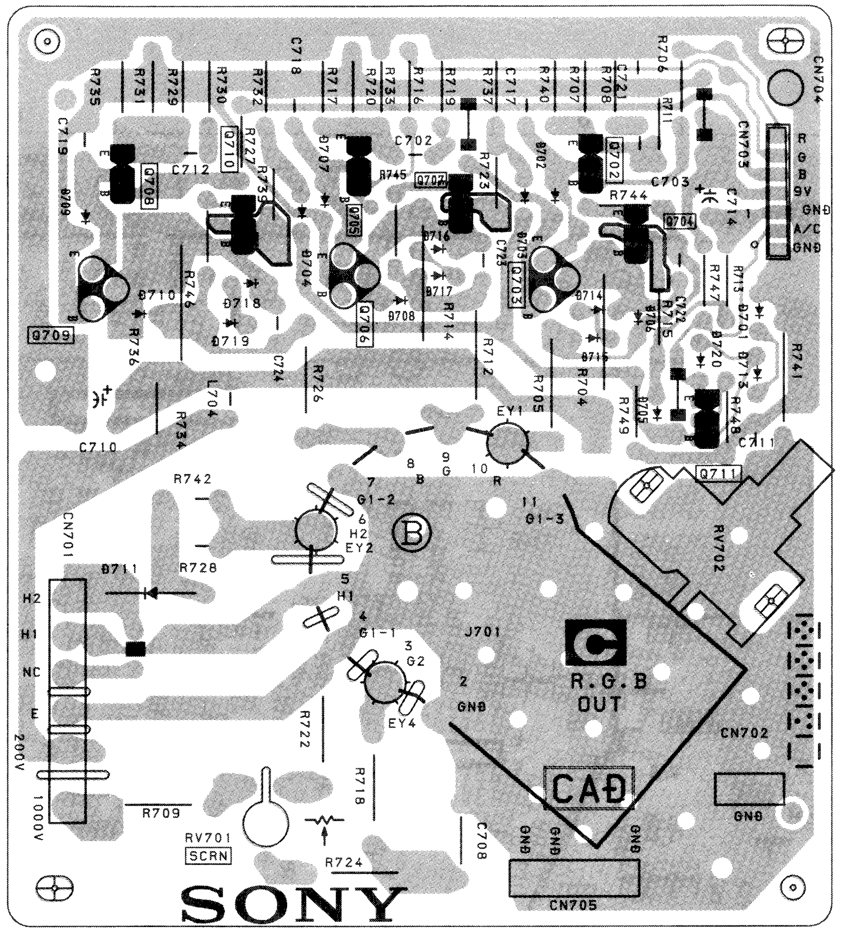
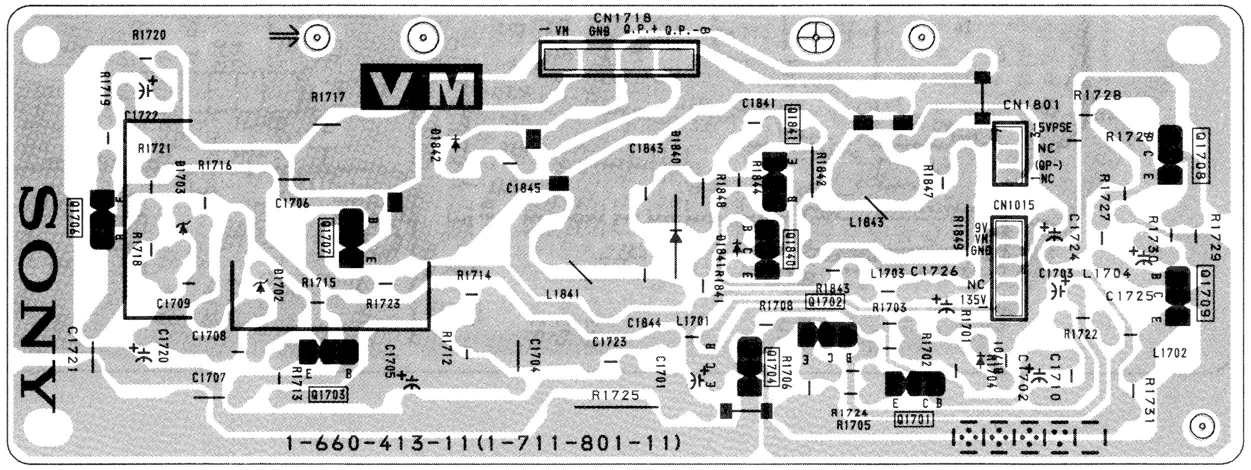
R1719
C1722
R1717
VM
CN1718
R1721
R1716
D1703
C1706
C1845
D1842
Q1706
R1718
Q1707
R1715
C1709
D1702
R1723
R1714
L1841
C1721
C1720
C1708
C1707
R1713
Q1703
C1705
R1712
C1704
C1723
R1725
SONY
1-660-413-11(1-711-801-1

C [R, G, B OUT] **VM** [VM AMP]

C Board

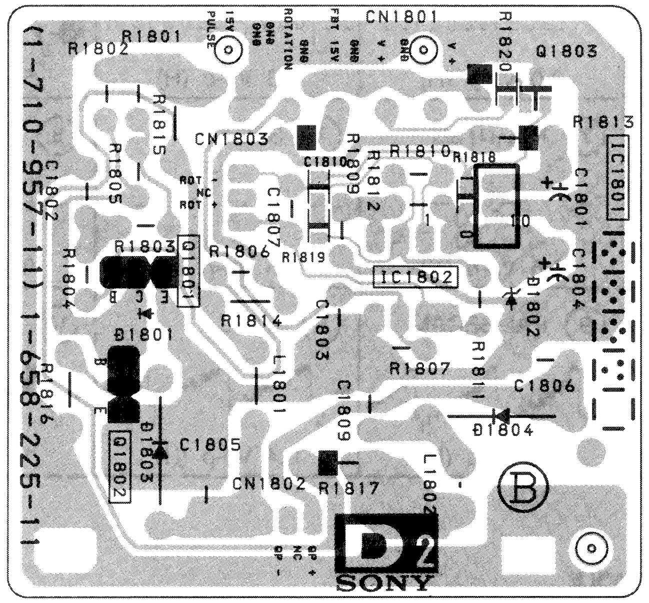

CN704
CN703
R
G
B
9V
GND
A/C
GND
Q702
Q703
Q704
Q705
Q706
Q707
Q708
Q709
Q710
Q711
EY1
EY2
EY4
G1-2
G1-3
G1-1
H2
H1
G2
J701
C
R.G.B
OUT
CAD
CN701
CN702
CN705
RV701
SCRN
RV702
R709
R724
R742
R728
D711
200V
1000V
NC
E
GND
SONY

VM Board


VM
CN1718
-VM
GND
Q.P.+
Q.P.-
CN1801
15VPSE
NC
(QP-)
NC
CN1015
9V
VM
GND
NC
135V
Q1701
Q1702
Q1703
Q1704
Q1706
Q1707
Q1708
Q1709
Q1840
Q1841
L1701
L1702
L1704
L1841
L1843
R1725
1-660-413-11(1-711-801-11)
SONY

D2 [ROTATION AMP]

D2 Board


CN1801
CN1802
CN1803
IC1801
IC1802
Q1801
Q1802
Q1803
D1801
D1802
D1803
D1804
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L1802
C1805
C1806
C1807
C1809
R1801
R1802
R1803
R1804
R1805
R1806
R1807
R1813
R1814
R1815
R1817
(1-710-957-11) 1-658-225-11
D2
SONY

C BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q702	2.0	11.4	1.4
Q703	12.0	168.3	11.4
Q704	168.3	6.0	163.5
Q705	1.7	11.4	1.2
Q706	12.0	178.8	11.4
Q707	178.2	6.2	173.8
Q708	2.0	11.4	1.4
Q709	12.0	168.3	11.4
Q710	168.0	6.4	160.0

VM BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

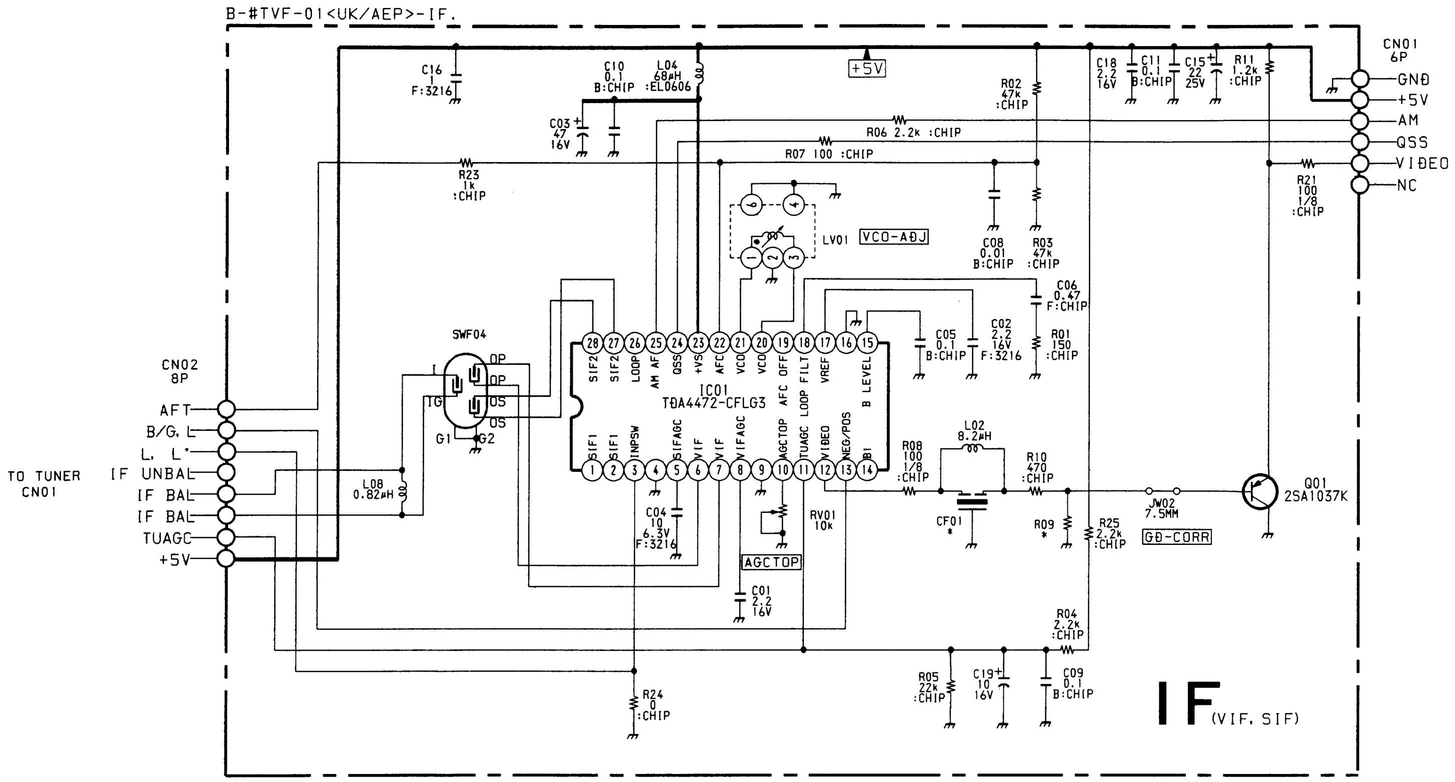
Ref No	B Base	C Collector	E Emitter
Q1701	2.5	8.8	1.8
Q1702	2.5	5.5	1.8
Q1703	134.3	71.8	134.8
Q1704	5.5	8.8	4.8
Q1706	1.0	71.8	0.4
Q1707	0.7	-	-
Q1708	2.9	6.6	2.2
Q1709	2.2	8.8	1.5
Q1840	0.6	-	-

D2 BOARD IC VOLTAGE TABLE

IC Voltage Table

Ref No	Pin No	Voltage (V)
IC1802	1-2	2.8
	3	3.0
	5-6	4.4
	7	6.2
	8	9.0

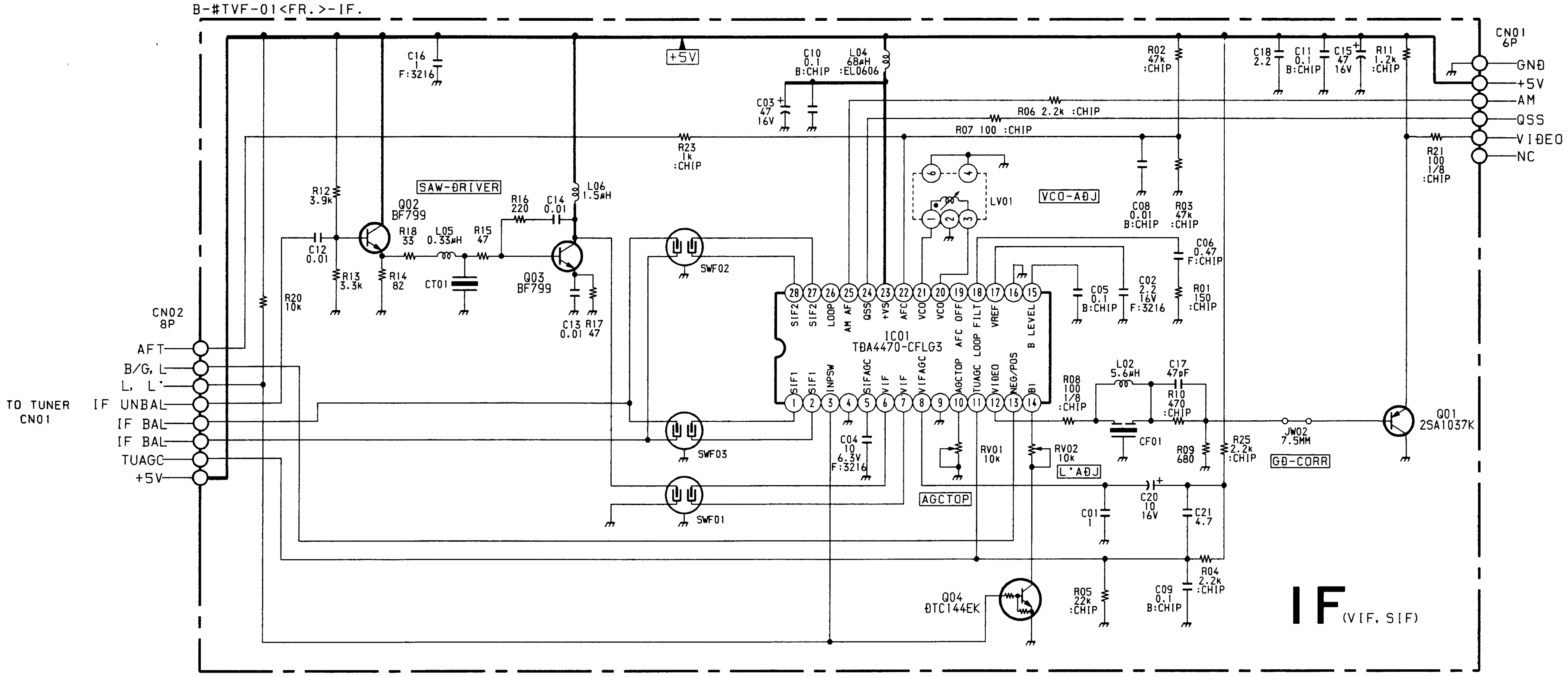
TUVIF (AEP) (KV-29X1A, 29X1D, 29X1E, 29X1K, 29X1L and 29X1R ONLY)
TUVIF (UK) (KV-29X1U ONLY)


B-#TVF-01<UK/AEP>-IF.
CN01 6P
GND
+5V
AM
QSS
VIDEO
NC
CN02 8P
AFT
B/G, L
L, L'
IF UNBAL
IF BAL
IF BAL
TUAGC
+5V
TO TUNER CN01
SWF04
IC01 TDA4472-CFLG3
LV01
VCO-ADJ
AGCTOP
GD-CORR
Q01 2SA1037K
CF01
RV01 10k
L02 8.2μH
L08 0.82μH
JW02 7.5MM
IF (VIF, SIF)

IF Board

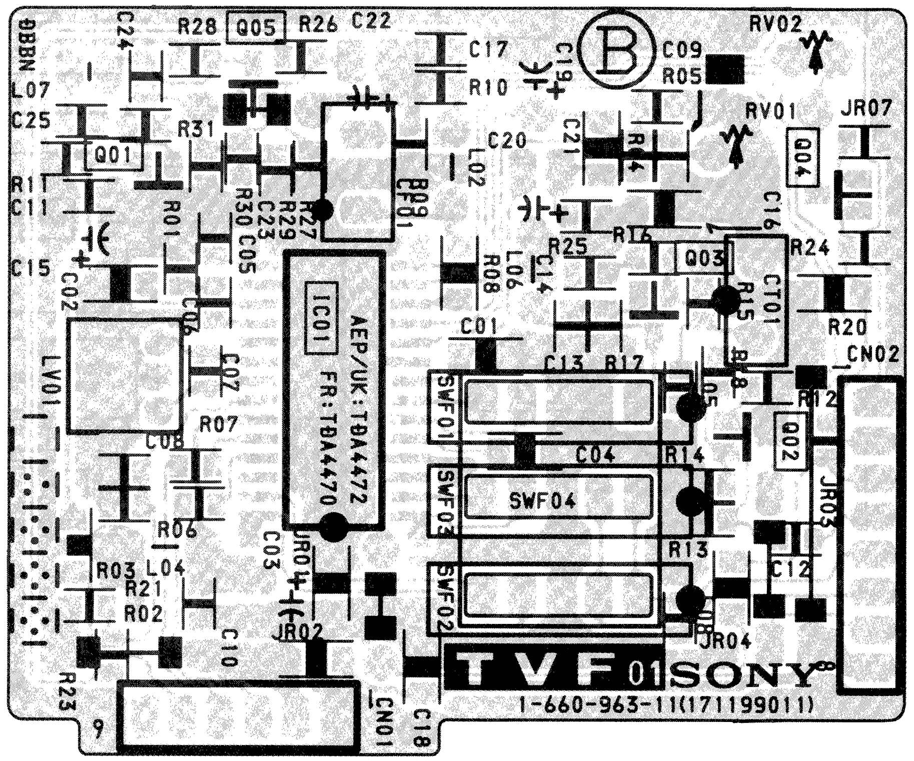
Model / Ref. No.	29X1A	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
CF01	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09	680MF	680MF	680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-29X1B ONLY)

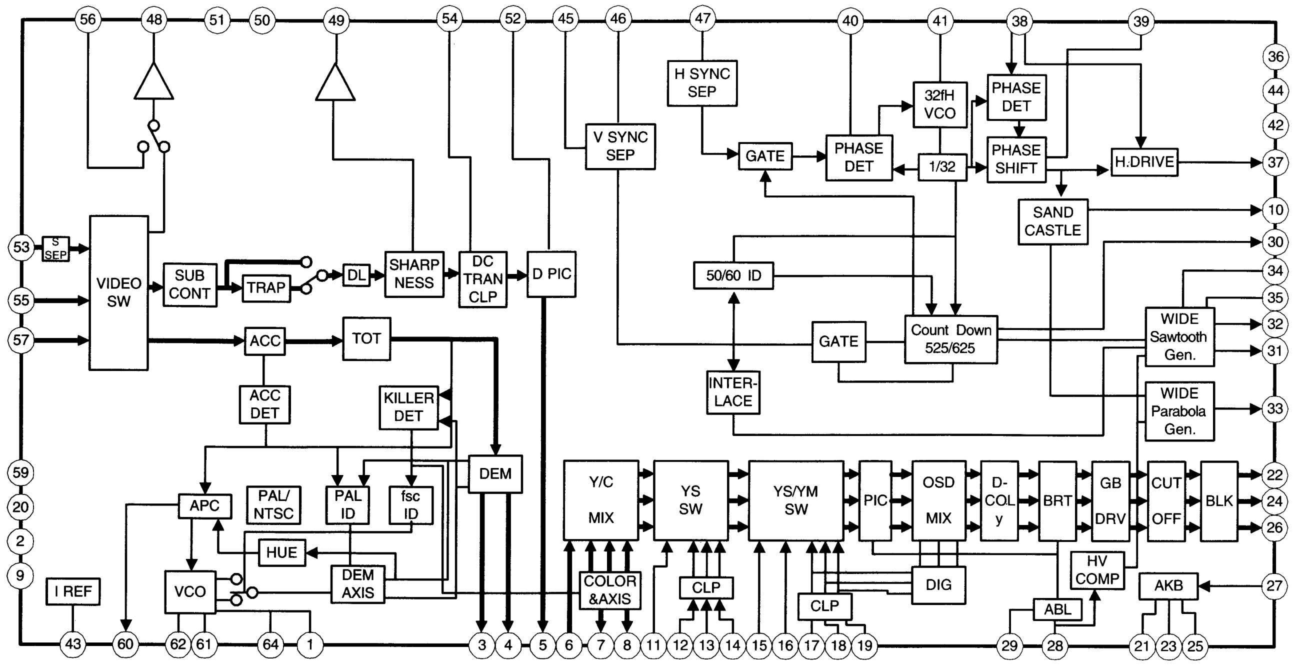

B-#TVF-01<FR.>-IF.
CN01 6P
GND
+5V
AM
QSS
VIDEO
NC
CN02 8P
AFT
B/G, L
L, L'
IF UNBAL
IF BAL
IF BAL
TUAGC
+5V
TO TUNER CN01
SAW-DRIVER
Q02 BF799
Q03 BF799
SWF01
SWF02
SWF03
IC01 TDA4470-CFLG3
LV01
VCO-ADJ
AGCTOP
L'ADJ
GD-CORR
Q01 2SA1037K
Q04 DTC144EK
CF01
RV01 10k
RV02 10k
JW02 7.5MM
IF (VIF, SIF)

IF [VIF, SIF]

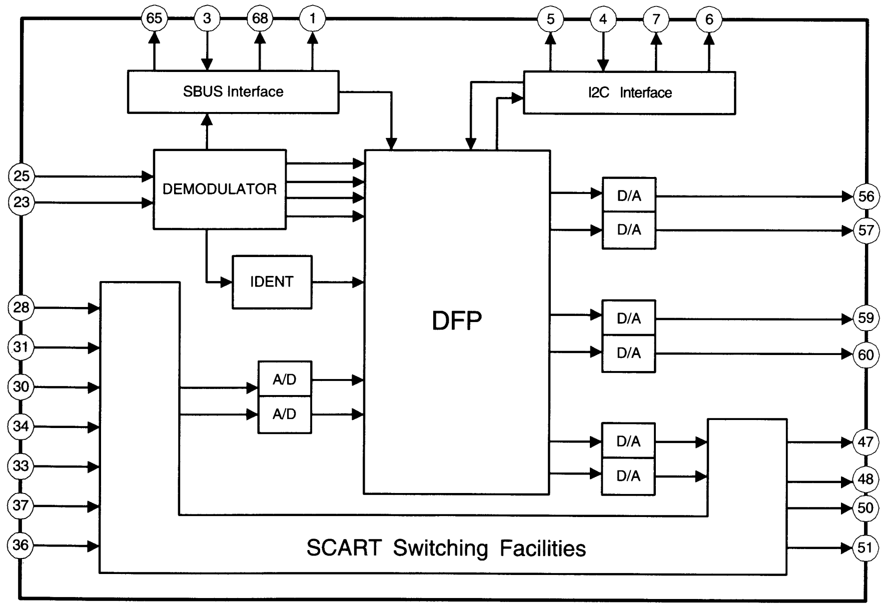
IF Board


TVF 01
SONY
1-660-963-11(17119901 1)
AEP/UK:TDA4472
FR:TDA4470
IC01
Q01
Q02
Q03
Q04
Q05
SWF01
SWF02
SWF03
SWF04
LV01
RV01
RV02
CN01
CN02
CF01
B

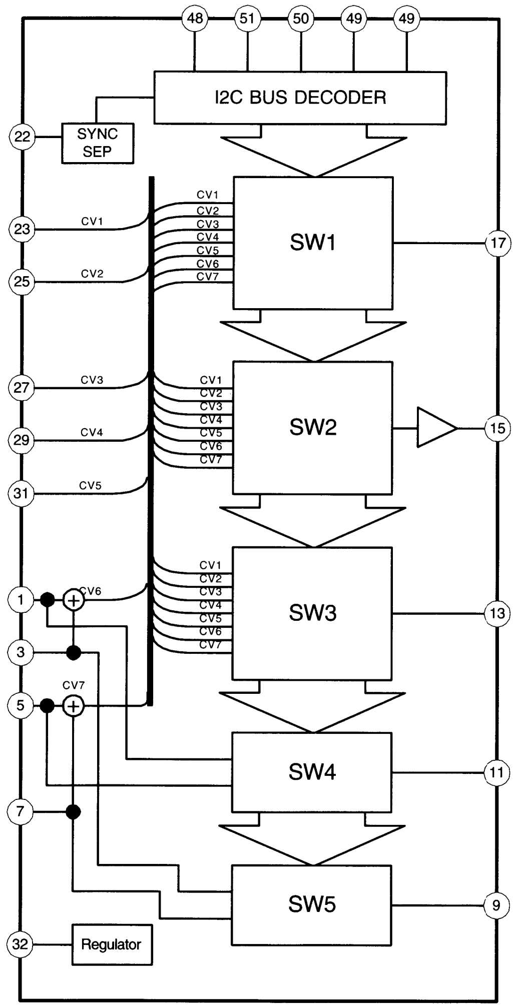
A BOARD IC301 CXA2000Q-TL


S SEP
VIDEO SW
SUB CONT
TRAP
DL
SHARP NESS
DC TRAN CLP
D PIC
V SYNC SEP
H SYNC SEP
GATE
PHASE DET
32fH VCO
1/32
PHASE DET
PHASE SHIFT
H.DRIVE
SAND CASTLE
50/60 ID
GATE
Count Down 525/625
INTER-LACE
WIDE Sawtooth Gen.
WIDE Parabola Gen.
ACC
TOT
ACC DET
KILLER DET
DEM
APC
PAL/ NTSC
PAL ID
fsc ID
HUE
VCO
DEM AXIS
I REF
Y/C MIX
COLOR &AXIS
YS SW
CLP
YS/YM SW
CLP
PIC
OSD MIX
D-COLy
DIG
BRT
GB DRV
CUT OFF
BLK
HV COMP
ABL
AKB

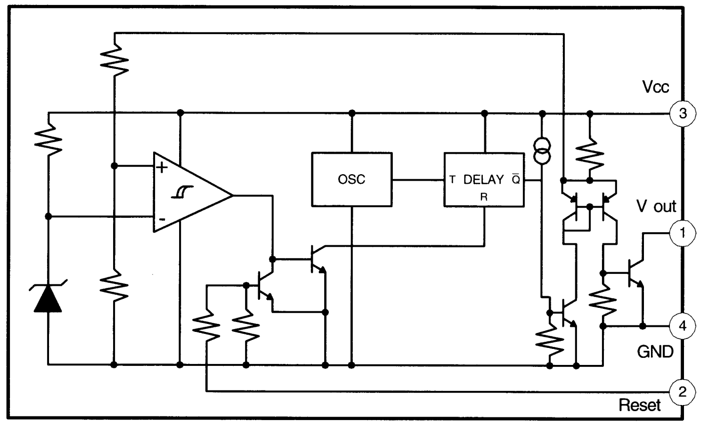
A BOARD IC202 MSP3410/MSP3400


SBUS Interface
I2C Interface
DEMODULATOR
IDENT
DFP
A/D
A/D
D/A
D/A
D/A
D/A
D/A
D/A
SCART Switching Facilities

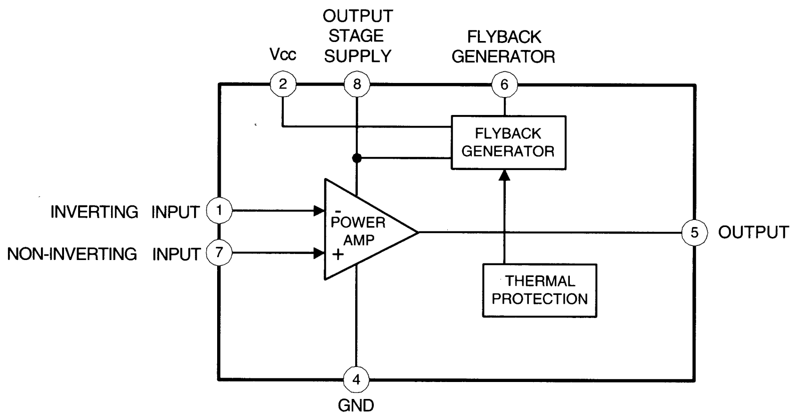
A BOARD IC201 CXA2040Q


I2C BUS DECODER
SYNC SEP
CV1
CV2
CV3
CV4
CV5
CV6
CV7
SW1
SW2
SW3
SW4
SW5
Regulator

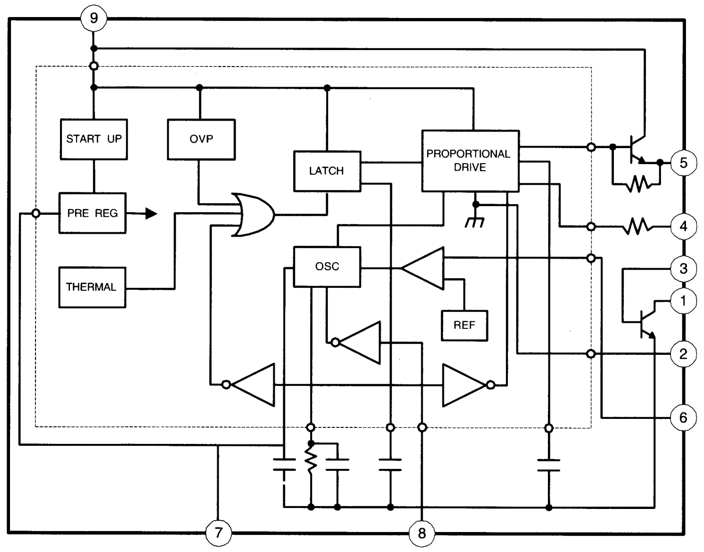
A BOARD IC4 PST593C


Vcc
OSC
T DELAY Q̄
R
V out
GND
Reset

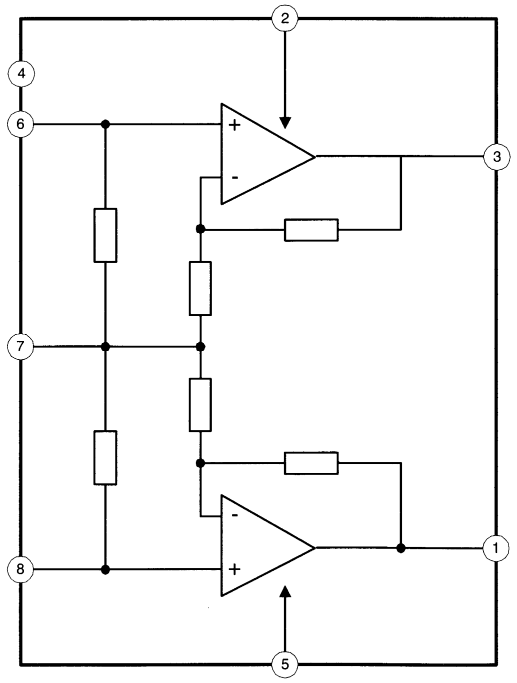
D BOARD IC500 STV9379


Vcc
OUTPUT STAGE SUPPLY
FLYBACK GENERATOR
FLYBACK GENERATOR
INVERTING INPUT
NON-INVERTING INPUT
POWER AMP
OUTPUT
THERMAL PROTECTION
GND

D BOARD IC600 STR-S6708

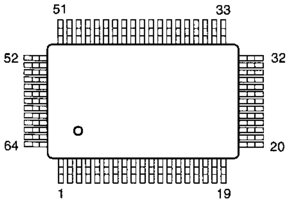

START UP
OVP
LATCH
PROPORTIONAL DRIVE
PRE REG
OSC
THERMAL
REF

D BOARD IC1200 TDA7264



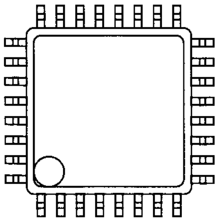
5-4. SEMICONDUCTORS

CXA2000Q-TL


51
33
52
32
64
20
1
19

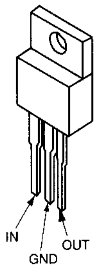
(TOP VIEW)

CXA2040Q-T4

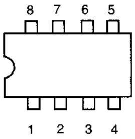


(TOP VIEW)

L4941BV

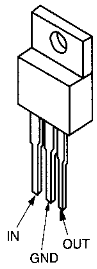


LM393P
M5216P
TDA2822M
μPC393C

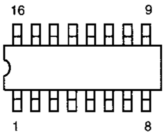


(TOP VIEW)

LM2940CT-5.0
LM2940CT
LM2940T-9.0
MCT7809CT
μPC2405HF

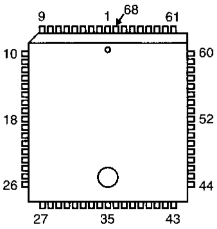


MC14052BDR2



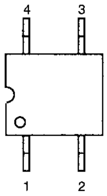
(TOP VIEW)

MSP3400C-PS
MSP3410-15


9
1
68
61
10
60
18
52
26
44
27
35
43

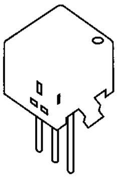
(TOP VIEW)

PST593C-MMP-4P

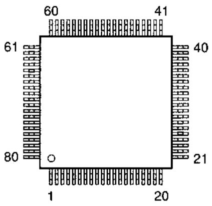


(TOP VIEW)

SBX1790-51

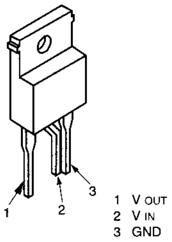


SDA5250M-GEG

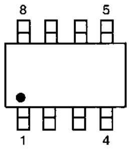

60
41
61
40
80
21
1
20

(TOP VIEW)

SE135N

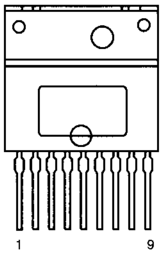

1
2
3
1 V OUT
2 V IN
3 GND

ST24E32M6TR

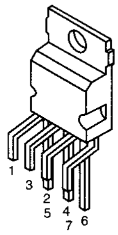


(TOP VIEW)

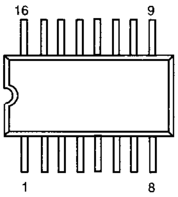
STR-S6708



STV9379

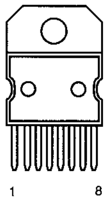


TDA4665T-T

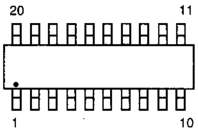


(TOP VIEW)

TDA7264

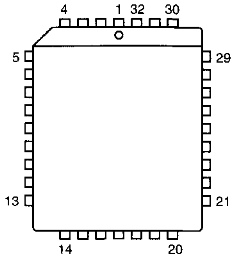


TDA8395T



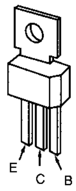
(TOP VIEW)

TMS27PC010A-15FML

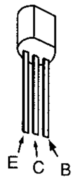

4
1
32
30
5
29
13
21
14
20

(TOP VIEW)

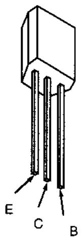
BF871-127



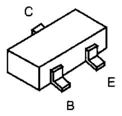
BF421L-AMMO
JA101TP-Q
2SA733-K
2SA933AS
2SA933S
2SA1091-O
2SC3502-F
2SC2808STP-R



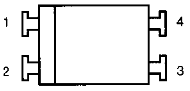
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC1740S-RT



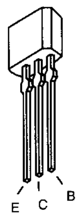
DTC144EK
2SA1037K
2SA1162-G
2SC2412K



TLP721(D4-)



2SC2785-HFE



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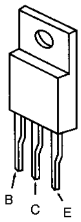
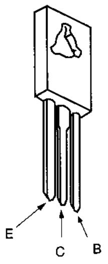
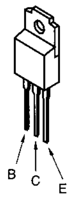
2SA1837
2SC3852A



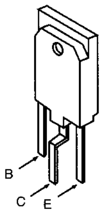
2SC2688-LK



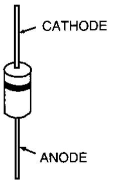
2SC4793



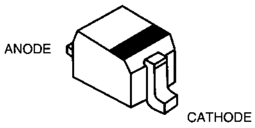
2SC4927-01



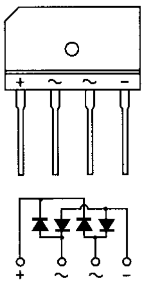
AU-01Z-V1
EG-1Z-V1
EGP20G
EL1Z
EM1-V1
EU-1-V1
EU2-V1
FML-G12S
GP08D
RGP02
RGP10GPKG23
RGP15GPKG23
RU3YX
RU4AM-T3
RU4DS


CATHODE
ANODE

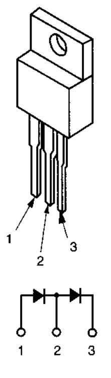
BAS216
DTZ6.8C
DTZ9.1
DTZ33B
MA8330
1SS355
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B


ANODE
CATHODE

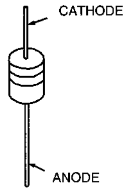
D4SB60L



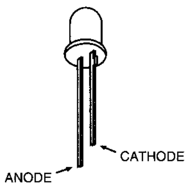
FMS-3FU



MTZJ-3.6A
MTZJ-3.9B
MTZJ-5.1B
MTZJ-5.6B
MTZJ-6.2B
MTZJ-6.8B
MTZJ-7.5C
MTZJ-9.1
MTZJ-T-77-9.1A
MTZJ-10
MTZJ-39
RD3.9ESB2
RD5.1ESB2
RD5.6ESB2
RD6.2ESB2
RD6.8ESB2
RD7.5ESB2
RD10ESB2
RD39ES-B2
1SS133T-77


CATHODE
ANODE

SLA-570KT3F


ANODE
CATHODE

SECTION 6

EXPLODED VIEWS

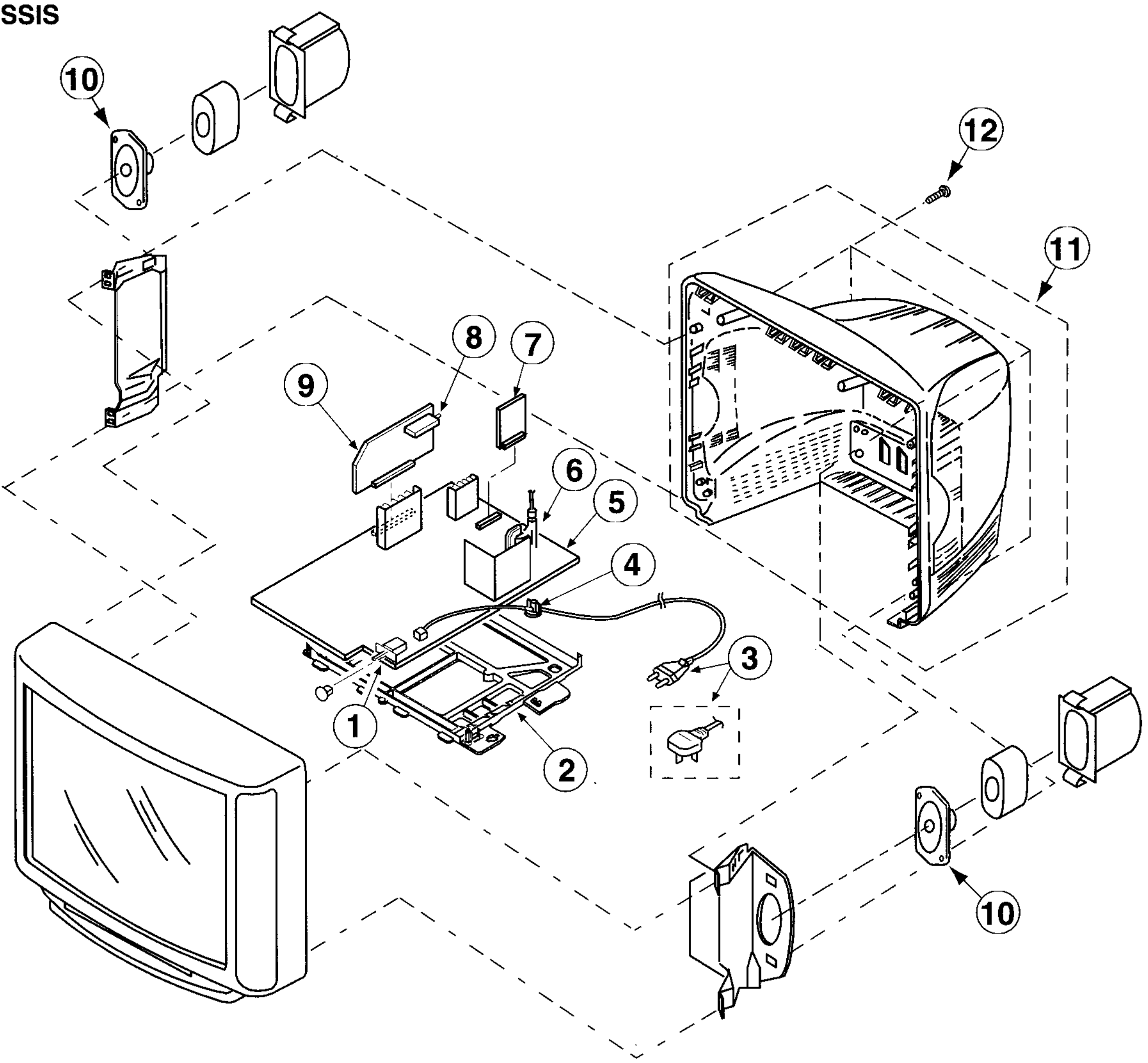
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

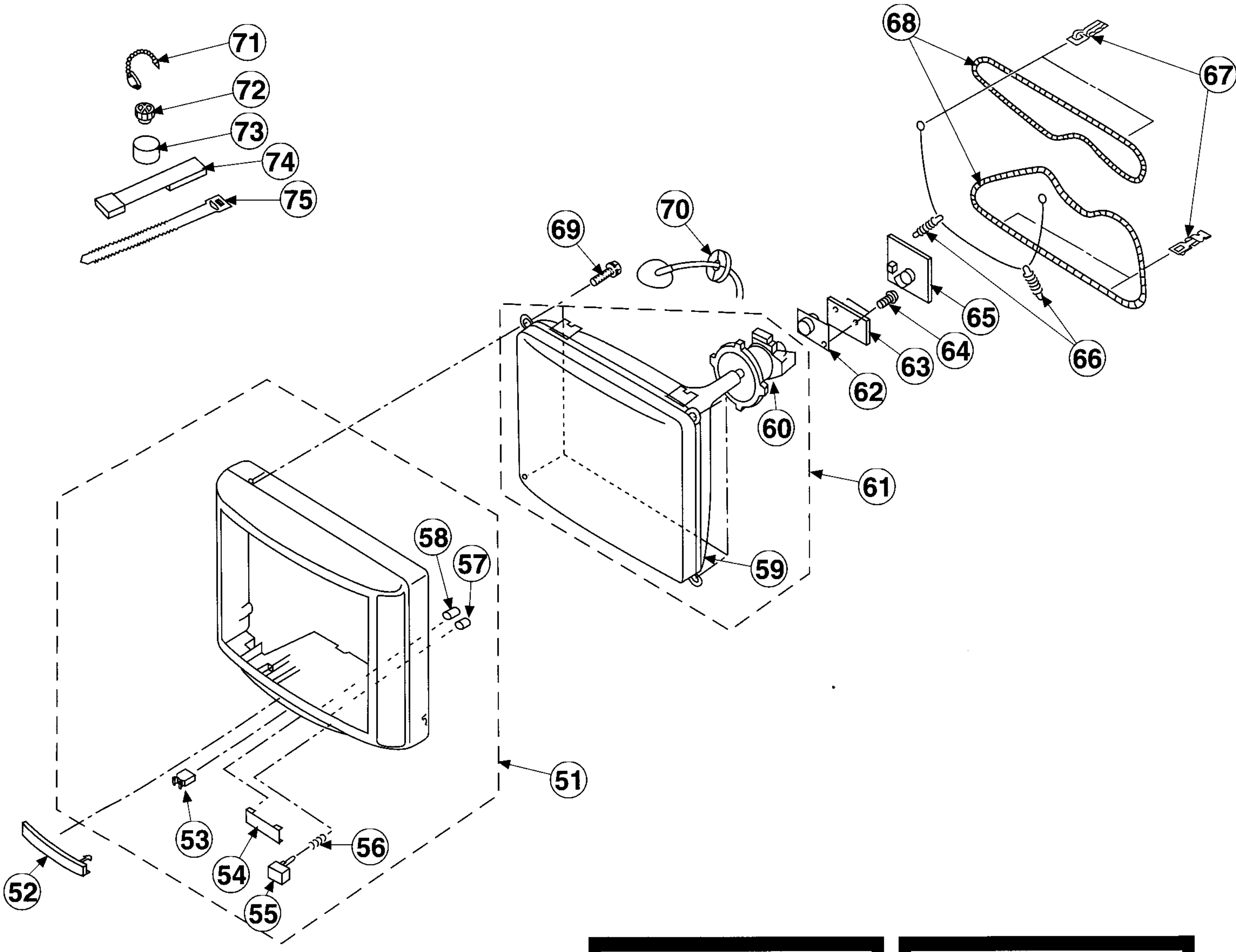
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO	PART NO	DESCRIPTION	REMARK
1	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
2	*4-203-315-01	BRACKET, MAIN	
3	⚠ 1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-29X1A/29X1B/29X1D/29X1E)	
	⚠ 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-29X1K/29X1R)	
	⚠ 1-776-240-11	CORD, POWER (FILTER) 3A/250V (KV-29X1L/29X1U)	
4	⚠ *4-202-531-01	AC CORD LOCK (SC)	
5	*A-1642-165-A	D BOARD, COMPLETE	
6	⚠ 1-453-169-11	TRANSFORMER ASSY, FLYBACK (UX-1604A2)	
7	*A-1640-214-A	D2 BOARD, COMPLETE	
8	1-693-338-11	TUNER/VIF (AEP) (KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R)	
	1-693-340-11	TUNER/VIF (FR) (KV-29X1B)	
	1-693-339-11	TUNER/VIF (UK) (KV-29X1U)	
9	*A-1632-423-A	A BOARD, COMPLETE (KV-29X1A)	
	*A-1632-425-A	A BOARD, COMPLETE (KV-29X1B)	
	*A-1632-422-A	A BOARD, COMPLETE (KV-29X1D)	
	*A-1632-424-A	A BOARD, COMPLETE (KV-29X1E)	
	*A-1632-426-A	A BOARD, COMPLETE (KV-29X1K)	
	*A-1632-433-A	A BOARD, COMPLETE (KV-29X1L)	
	*A-1632-427-A	A BOARD, COMPLETE (KV-29X1R)	
	*A-1632-400-A	A BOARD, COMPLETE (KV-29X1U)	
10	1-544-727-11	SPEAKER (7.5x13CM)	
11	X-4200-257-1	COVER ASSY, REAR (SC)	
12	4-039-358-01	SCREW (4x16), (+) BV TAPPING	

6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-258-1	BEZNET ASSY	53-58
52	4-203-364-01	DOOR, CONTROL	
53	4-047-464-01	CATCHER, PUSH	
54	4-203-365-01	WINDOW, ORNAMENTAL	
55	4-203-362-01	BUTTON, POWER	
56	4-202-964-01	SPRING	
57	*4-203-363-01	GUIDE, LED LIGHT	
58	4-202-465-01	GUIDE, LED LIGHT	
59 ⚠	8-733-856-05	PICTURE TUBE (SD-269) (M68LCT60X)	
60 ⚠	8-451-467-11	DEFLECTION YOKE (Y29GXA2B)	
61 ⚠	8-733-856-71	ITC	59-60
62 ⚠	8-453-005-11	NECK ASSY (NA297-M)	
63	*A-1644-070-A	VM BOARD, COMPLETE	
64	4-639-357-01	SCREW(3x8), (+) BV TAPPING	
65	*A-1638-082-A	C BOARD, COMPLETE	
66	4-200-433-01	SPRING, EXTENSION	
67	4-202-415-01	CLIP, DGC (29")	
68 ⚠	1-406-807-11	COIL, DEGAUSSING	
69	4-036-188-01	SCREW (M), PT	
70	4-202-693-01	HOLDER, HV CABLE	
71	4-308-870-00	CLIP, LEAD WIRE	
72	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM 0	
73	1-452-032-00	MAGNET, DISK; 10MM 0	
74	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
75	3-701-007-00	BAND, BINDING	

SECTION 7

ELECTRICAL PARTS LIST

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
MF : mF, PF : mmF

COILS
MMH : mH, μH : mH

A

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1632-423-A	A BOARD, COMPLETE (KV-29X1A) *****************		
	*A-1632-425-A	A BOARD, COMPLETE (KV-29X1B) *****************		
	*A-1632-422-A	A BOARD, COMPLETE (KV-29X1D) *****************		
	*A-1632-424-A	A BOARD, COMPLETE (KV-29X1E) *****************		
	*A-1632-426-A	A BOARD, COMPLETE (KV-29X1K) *****************		
	*A-1632-433-A	A BOARD, COMPLETE (KV-29X1L) *****************		
	*A-1632-427-A	A BOARD, COMPLETE (KV-29X1R) *****************		
	*A-1632-400-A	A BOARD, COMPLETE (KV-29X1U) *****************		
	1-750-797-11	SOCKET, PLCC		
		< CAPACITOR >		
C1	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C2	1-126-965-11	ELECT 22MF	20%	50V
C3	1-163-104-00	CERAMIC CHIP 30PF	5%	50V
C4	1-163-104-00	CERAMIC CHIP 30PF	5%	50V
C8	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C10	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C11	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C15	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C18	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C19	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C21	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C22	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C40	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C41	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C42	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C43	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C44	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C45	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C80	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C81	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C82	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C90	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C101	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C102	1-126-934-11	ELECT 220MF	20%	16V
C103	1-126-965-11	ELECT 22MF	20%	50V
C104	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C110	1-126-967-11	ELECT 47MF	20%	16V
C112	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C113	1-126-967-11	ELECT 47MF	20%	16V
C120	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C121	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C122	1-163-137-00	CERAMIC CHIP 680PF	5%	50V
C123	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C124	1-137-399-11	FILM 0.1MF	5%	50V
C201	1-163-139-00	CERAMIC CHIP 820PF	10%	50V
C202	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C203	1-126-933-11	ELECT 100MF	20%	16V
C204	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C205	1-126-965-11	ELECT 22MF	20%	50V
C206	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C207	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C208	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C209	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C210	1-216-295-00	METAL GLAZE 0	5%	1/10W
C211	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C212	1-164-346-11	CERAMIC CHIP 1MF		16V
C213	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C214	1-164-346-11	CERAMIC CHIP 1MF		16V
C215	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C216	1-126-967-11	ELECT 47MF	20%	16V
C217	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C218	1-126-967-11	ELECT 47MF	20%	16V
C219	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C220	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C221	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C222	1-164-346-11	CERAMIC CHIP 1MF		16V
C223	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C224	1-164-346-11	CERAMIC CHIP 1MF		16V
C225	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C226	1-126-967-11	ELECT 47MF	20%	16V
C227	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C228	1-126-967-11	ELECT 47MF	20%	16V
C229	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C230	1-216-295-00	METAL GLAZE 0	5%	1/10W
C231	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C232	1-126-967-11	ELECT 47MF	20%	16V
C251	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C252	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C253	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C254	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C255	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C256	1-163-038-00	CERAMIC CHIP 0.1MF		25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C257	1-126-965-11	ELECT 22MF 20% 50V	
C258	1-126-964-11	ELECT 10MF 20% 50V	
C259	1-164-336-11	CERAMIC CHIP 0.33MF 25V	
C260	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C261	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C262	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C263	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C264	1-126-962-11	ELECT 3.3MF 20% 50V	
C265	1-126-964-11	ELECT 10MF 20% 50V	
C266	1-126-964-11	ELECT 10MF 20% 50V	
C267	1-126-965-11	ELECT 22MF 20% 50V	
C268	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C269	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C270	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C271	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C272	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C273	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C274	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C275	1-164-346-11	CERAMIC CHIP 1MF 16V	
C276	1-164-346-11	CERAMIC CHIP 1MF 16V	
C277	1-164-346-11	CERAMIC CHIP 1MF 16V	
C278	1-164-346-11	CERAMIC CHIP 1MF 16V	
C279	1-126-965-11	ELECT 22MF 20% 50V	
C280	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C281	1-126-965-11	ELECT 22MF 20% 50V	
C282	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C300	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C301	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C302	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C303	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C304	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C305	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C306	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C307	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C308	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C309	1-164-346-11	CERAMIC CHIP 1MF 16V	
C310	1-164-346-11	CERAMIC CHIP 1MF 16V	
C311	1-164-346-11	CERAMIC CHIP 1MF 16V	
C312	1-164-505-11	CERAMIC CHIP 2.2MF 16V	
C313	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C315	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C317	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C319	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V	
C320	1-126-965-11	ELECT 22MF 20% 50V	
C321	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C322	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C323	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C324	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C325	1-164-346-11	CERAMIC CHIP 1MF 16V	
C326	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C327	1-137-374-11	FILM 0.047MF 5% 50V	
C328	1-126-964-11	ELECT 10MF 20% 50V	
C329	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C330	1-130-777-00	FILM 0.1MF 5% 63V	
C331	1-137-581-11	FILM 0.1MF 5% 100V	
C332	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C333	1-126-933-11	ELECT 100MF 20% 16V	
C334	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C335	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C336	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C337	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C338	1-164-346-11	CERAMIC CHIP 1MF 16V	
C339	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C340	1-126-933-11	ELECT 100MF 20% 16V	
C341	1-164-005-11	CERAMIC CHIP 0.47MF 25V	
C342	1-164-346-11	CERAMIC CHIP 1MF 16V	
C343	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V	
C344	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C347	1-164-005-11	CERAMIC CHIP 0.47MF 25V	
C348	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C350	1-126-964-11	ELECT 10MF 20% 50V	
C351	1-164-505-11	CERAMIC CHIP 2.2MF 16V	
C352	1-164-005-11	CERAMIC CHIP 0.47MF 25V	
C353	1-164-505-11	CERAMIC CHIP 2.2MF 16V	
C354	1-164-005-11	CERAMIC CHIP 0.47MF 25V	
C355	1-126-965-11	ELECT 22MF 20% 50V	
C356	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C357	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C358	1-164-005-11	CERAMIC CHIP 0.47MF 25V	
C359	1-163-231-11	CERAMIC CHIP 15PF 5% 50V	
C360	1-163-231-11	CERAMIC CHIP 15PF 5% 50V	
C370	1-164-505-11	CERAMIC CHIP 2.2MF 16V	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)
C371	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C372	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)
C373	1-164-489-11	CERAMIC CHIP 0.22MF 10% 16V	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)

< FILTER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CF120	1-409-327-00	TRAP, CERAMIC (6.5MHz)	(KV-29X1B)

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
CN2	*1-568-880-51	PIN, CONNECTOR 5P	
CN201	1-766-296-11	CONNECTOR, DUAL SCART	
CN301	*1-568-882-51	PIN, CONNECTOR 7P	

< DIODE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2	8-719-988-62	DIODE 1SS355	
D10	8-719-158-15	DIODE RD5.6S-B	
D11	8-719-158-15	DIODE RD5.6S-B	
D12	8-719-158-15	DIODE RD5.6S-B	
D101	8-719-977-81	DIODE DTZ33B	
D201	8-719-977-22	DIODE DTZ9.1	
D202	8-719-977-22	DIODE DTZ9.1	
D203	8-719-977-22	DIODE DTZ9.1	
D204	8-719-977-22	DIODE DTZ9.1	
D205	8-719-977-22	DIODE DTZ9.1	
D206	8-719-977-22	DIODE DTZ9.1	
D207	8-719-977-22	DIODE DTZ9.1	
D208	8-719-977-22	DIODE DTZ9.1	
D209	8-719-977-22	DIODE DTZ9.1	
D210	8-719-977-22	DIODE DTZ9.1	
D211	8-719-977-22	DIODE DTZ9.1	
D212	8-719-977-22	DIODE DTZ9.1	
D213	8-719-977-22	DIODE DTZ9.1	
D214	8-719-977-22	DIODE DTZ9.1	
D215	8-719-977-22	DIODE DTZ9.1	
D216	8-719-158-15	DIODE RD5.6S-B	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D217	8-719-158-15	DIODE RD5.6S-B	
D218	8-719-158-15	DIODE RD5.6S-B	
D220	8-719-988-62	DIODE 1SS355	
D221	8-719-988-62	DIODE 1SS355	
D222	8-719-977-22	DIODE DTZ9.1	
D223	8-719-977-22	DIODE DTZ9.1	
D224	8-719-977-22	DIODE DTZ9.1	
D225	8-719-977-22	DIODE DTZ9.1	
D226	8-719-977-22	DIODE DTZ9.1	
D227	8-719-977-13	DIODE DTZ6.8C	
D251	8-719-047-16	DIODE BAS216	
D320	8-719-977-22	DIODE DTZ9.1	
D370	8-719-047-16	DIODE BAS216	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)

< ENCAPSULATED FILTER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL101	1-236-071-11	ENCAPSULATED COMPONENT	
FL201	1-236-071-11	ENCAPSULATED COMPONENT	
FL202	1-236-071-11	ENCAPSULATED COMPONENT	
FL203	1-236-071-11	ENCAPSULATED COMPONENT	

< IC >

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1	8-759-376-75	IC SDA5250M-GEG	
IC2	8-759-334-20	IC ST24E32M6TR	
IC3	8-759-428-13	IC TMS27PC010A-15FMBE101	(KV-29X1A/29X1B/29X1D/29X1K)
	8-759-428-12	IC TMS27PC010A-15FMBW101	(KV-29X1E/29X1L/29X1U)
	8-759-167-62	IC TMS27PC010A-15FML	(KV-29X1R)
IC4	8-759-394-57	IC PST593C-MMP-4P	
IC201	8-752-076-06	IC CXA2040Q-T4	
IC202	8-759-376-56	IC MSP3400C-PS	(KV-29X1A/29X1D/29X1K/29X1R)
	8-759-376-80	IC MSP3410-15	(KV-29X1B/29X1E/29X1L/29X1U)
IC203	8-759-385-76	IC MC14052BDR2	
IC301	8-752-076-09	IC CXA2000Q-TL	
IC302	8-759-288-85	IC TDA4665T-T	
IC303	8-759-251-56	IC TDA8395T	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)

< COIL >

REF.NO.	PART NO.	DESCRIPTION	REMARK
L10	1-410-379-31	INDUCTOR CHIP 6.8UH	
L102	1-408-406-00	INDUCTOR 5.6UH	(KV-29X1B)
L111	1-410-993-11	INDUCTOR CHIP 1UH	
L120	1-408-408-00	INDUCTOR 8.2UH	
L121	1-408-397-00	INDUCTOR 1UH	
L122	1-408-408-00	INDUCTOR 8.2UH	
L300	1-408-607-31	INDUCTOR 22UH	

< TRANSISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q4	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q5	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q10	8-729-216-22	TRANSISTOR 2SA1162-G	
Q11	8-729-216-22	TRANSISTOR 2SA1162-G	
Q12	8-729-216-22	TRANSISTOR 2SA1162-G	
Q15	8-729-901-01	TRANSISTOR DTC144EK	
Q16	8-729-901-01	TRANSISTOR DTC144EK	
Q17	8-729-901-01	TRANSISTOR DTC144EK	
Q18	8-729-901-01	TRANSISTOR DTC144EK	
Q80	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q81	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q111	8-729-216-22	TRANSISTOR 2SA1162-G	
Q112	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
Q120	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-29X1B)
Q122	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q124	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-29X1B)
Q130	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-29X1B)
Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q203	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q204	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q205	8-729-901-01	TRANSISTOR DTC144EK	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
Q300	8-729-901-01	TRANSISTOR DTC144EK	
Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q305	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q306	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q330	8-729-216-22	TRANSISTOR 2SA1162-G	
Q331	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q332	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1002	8-729-216-22	TRANSISTOR 2SA1162-G	

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR2	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR101	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR206	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR207	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR304	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR305	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R1	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R2	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R3	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R4	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R5	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R7	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R8	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R9	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R10	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R11	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R12	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R13	1-216-029-00	METAL GLAZE 150 5% 1/10W	(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)
R14	1-216-029-00	METAL GLAZE 150 5% 1/10W	(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)
R15	1-216-029-00	METAL GLAZE 150 5% 1/10W	(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)
R16	1-216-025-91	METAL GLAZE 100 5% 1/10W	(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)

A

REF.NO.	PART NO.	DESCRIPTION	REMARK
R17	1-216-025-91	METAL GLAZE 100 5% 1/10W	(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R20	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R21	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R24	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R25	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R28	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R29	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R30	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R31	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R32	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R33	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R34	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R35	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R36	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R37	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R38	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R39	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R40	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R42	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R44	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R46	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R47	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R48	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R49	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R50	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R51	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R52	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R53	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R54	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R58	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R59	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R60	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R61	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R62	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R63	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R64	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R65	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R66	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R67	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R69	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R70	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R71	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R72	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R73	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R74	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R75	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R76	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R77	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R78	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R79	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R80	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R81	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R82	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R83	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R84	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R85	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R86	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R87	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R88	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R91	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R92	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R93	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R94	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R95	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R97	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R98	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R101	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R102	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R103	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R104	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R105	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R106	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R110	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R111	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R112	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R113	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R114	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R115	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R116	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R117	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	(KV-29X1A/29X1B/29X1D/29X1E/29X1K/29X1L/29X1R)
	1-216-056-00	METAL GLAZE 2K 5% 1/10W	(KV-29X1U)
R118	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R119	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R120	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R121	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R122	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R123	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R124	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R125	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R126	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R127	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R128	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R129	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R130	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R131	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R132	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R133	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R134	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R135	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R136	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R137	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R138	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R200	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R201	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R202	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R203	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R204	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R205	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R206	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R208	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R209	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R210	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R211	1-216-033-00	METAL GLAZE 220 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R212	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R213	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R214	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R216	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R217	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R218	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R219	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R220	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R221	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R222	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R223	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R224	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R225	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R226	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R227	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R228	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R229	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R230	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R232	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R233	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R234	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R235	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R236	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R237	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R238	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R239	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R240	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R241	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R242	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R243	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R244	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R245	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R246	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R247	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R249	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R255	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R256	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R270	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R271	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R272	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R273	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R280	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R281	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R282	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R283	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R284	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R285	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R286	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R300	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R301	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R302	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R303	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R308	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R309	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R310	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R311	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R312	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R313	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R314	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R315	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R316	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R318	1-216-689-11	METAL GLAZE 39K 5% 1/10W	
R319	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R320	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R321	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R322	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R323	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R324	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R326	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R327	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R328	1-216-129-00	METAL GLAZE 2.2M 5% 1/10W	
R329	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R330	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R331	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R332	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R333	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R334	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R335	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R336	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R337	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R338	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R339	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R340	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R341	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R342	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R343	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R344	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R345	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R346	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R347	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R348	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R349	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R350	1-216-042-00	METAL GLAZE 510 5% 1/10W	
R351	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R352	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R353	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R354	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R357	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R370	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		< TUNER >	
TU101	1-693-338-11	TUNER/VIF (AEP) (KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R)	
	1-693-340-11	TUNER/VIF (FR) (KV-29X1B)	
	1-693-339-11	TUNER/VIF (UK) (KV-29X1U)	
		< CRYSTAL >	
X1	1-767-120-21	VIBRATOR, CERAMIC	
X201	1-760-628-11	VIBRATOR, CRYSTAL	
X301	1-567-504-11	OSCILLATOR, CRYSTAL	
X302	1-567-505-11	OSCILLATOR, CRYSTAL	
X303	1-767-127-11	VIBRATOR, CERAMIC	

IF (KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)

REF.NO.	PART NO.	DESCRIPTION	REMARK
	A-1652-037-A	IF BOARD, COMPLETE ******************	(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R)
	A-1652-038-A	IF BOARD, COMPLETE ******************	(KV-29X1U)
		< CAPACITOR >	
C01	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C02	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C03	1-104-957-11	ELECT 47MF	20% 16V
C04	1-135-259-11	TANTAL. CHIP 10MF	20% 6.3V
C05	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C06	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C08	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C09	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C10	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C11	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C15	1-124-282-00	ELECT 22MF	20% 25V
C16	1-162-638-11	CERAMIC CHIP 1MF	16V
C18	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C19	1-124-937-11	ELECT 10MF	20% 16V
		< FILTER >	
CF01	1-404-134-00	TRAP, CERAMIC (5.5MHZ)	
SWF04	1-767-084-11	FILTER, SURFACE WAVE	
		< IC >	
IC01	8-759-385-26	IC TDA4472-CFLG3	
		< COIL >	
L02	1-408-408-00	INDUCTOR 8.2UH	
L04	1-408-419-00	INDUCTOR 68UH	
L08	1-410-992-11	INDUCTOR CHIP 0.82UH	
		< VARIABLE COIL >	
LV01	1-411-874-11	COIL	
		< TRANSISTOR >	
Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
JR01	1-216-296-91	METAL GLAZE 0	5% 1/8W
JR02	1-216-296-91	METAL GLAZE 0	5% 1/8W
JR03	1-216-295-00	METAL GLAZE 0	5% 1/10W
JR04	1-216-296-91	METAL GLAZE 0	5% 1/8W
JR05	1-216-295-00	METAL GLAZE 0	5% 1/10W
JR07	1-216-295-00	METAL GLAZE 0	5% 1/10W
R01	1-216-029-00	METAL GLAZE 150	5% 1/10W
R02	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R03	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R04	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R05	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R06	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R07	1-216-025-91	METAL GLAZE 100	5% 1/10W
R08	1-216-174-00	METAL GLAZE 100	5% 1/8W
R09	1-216-045-00	METAL GLAZE 680	5% 1/10W
R10	1-216-041-00	METAL GLAZE 470	5% 1/10W
R11	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R23	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R24	1-216-295-91	METAL GLAZE 0	5% 1/10W
R25	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R021	1-216-174-00	METAL GLAZE 100	5% 1/8W
		< VARIABLE RESISTOR >	
RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K	

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IF (KV-29X1B)

REF.NO.	PART NO.	DESCRIPTION	REMARK
	A-1652-036-A	IF BOARD, COMPLETE ******************	(KV-29X1B)
		< CAPACITOR >	
C01	1-162-638-11	CERAMIC CHIP 1MF	16V
C02	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C03	1-104-957-11	ELECT 47MF	20% 16V
C04	1-135-259-11	TANTAL. CHIP 10MF	20% 6.3V
C05	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C06	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C08	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C09	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C10	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C11	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C12	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C13	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C14	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C15	1-104-957-11	ELECT 47MF	20% 16V
C16	1-162-638-11	CERAMIC CHIP 1MF	16V
C17	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C18	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C20	1-124-937-11	ELECT 10MF	20% 16V
C21	1-164-506-11	CERAMIC CHIP 4.7MF	16V
		< FILTER >	
CF01	1-409-430-11	TRAP, CERAMIC	
SWF01	1-579-273-11	FILTER, SURFACE WAVE	
SWF02	1-760-329-11	FILTER, SURFACE WAVE	
SWF03	1-767-083-11	FILTER, SURFACE WAVE	
		< TRIMMER >	
CT01	1-760-662-11	TRAP, CERAMIC	
		< IC >	
IC01	8-759-069-36	IC MC74HC4046AF	
		< COIL >	
L02	1-408-406-00	INDUCTOR 5.6UH	
L04	1-408-419-00	INDUCTOR 68UH	
L05	1-410-987-11	INDUCTOR CHIP 0.33UH	
L06	1-408-399-00	INDUCTOR 1.5UH	
		< VARIABLE COIL >	
LV01	1-411-874-11	COIL	
		< TRANSISTOR >	
Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
Q02	8-729-035-11	TRANSISTOR BF799-GEG	
Q03	8-729-035-11	TRANSISTOR BF799-GEG	
Q04	8-729-901-01	TRANSISTOR DTC144EK	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
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The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR01	1-216-296-91	METAL GLAZE	0	5%	1/8W	
JR02	1-216-296-91	METAL GLAZE	0	5%	1/8W	
JR03	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR04	1-216-296-91	METAL GLAZE	0	5%	1/8W	
JR05	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR07	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R01	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R02	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R03	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R04	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R05	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R06	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R07	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R08	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R09	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R10	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R11	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R12	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R13	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R14	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R15	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R16	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R17	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R18	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R20	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R23	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R25	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R21	1-216-174-00	METAL GLAZE	100	5%	1/8W	

< VARIABLE RESISTOR >

RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K
RV02	1-226-703-11	RES, ADJ, METAL GLAZE 10K

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*A-1638-082-A C BOARD, COMPLETE
****

< CAPACITOR >

C702	1-102-824-00	CERAMIC	470PF	5%	50V
C703	1-102-116-00	CERAMIC	680PF	10%	50V
C708	1-162-114-00	CERAMIC	0.0047MF		2KV
C710	1-107-652-11	ELECT	10MF	20%	250V
C712	1-102-116-00	CERAMIC	680PF	10%	50V
C714	1-126-967-11	ELECT	47MF	20%	16V
C717	1-102-114-00	CERAMIC	470PF	10%	50V
C718	1-102-114-00	CERAMIC	470PF	10%	50V
C719	1-102-114-00	CERAMIC	470PF	10%	50V
C722	1-101-880-00	CERAMIC	47PF	5%	50V
C723	1-101-880-00	CERAMIC	47PF	5%	50V
C724	1-101-880-00	CERAMIC	47PF	5%	50V

< CONNECTOR >

CN701	1-778-037-11	PIN, CONNECTOR 6P
CN702	1-695-915-11	TAB (CONTACT)
CN703	*1-568-882-51	PIN, CONNECTOR 7P

< DIODE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
D701	8-719-109-72	DIODE RD3.9ES-B2	
D702	8-719-991-33	DIODE 1SS133T-77	
D706	8-719-991-33	DIODE 1SS133T-77	
D707	8-719-991-33	DIODE 1SS133T-77	
D708	8-719-991-33	DIODE 1SS133T-77	
D709	8-719-991-33	DIODE 1SS133T-77	
D710	8-719-991-33	DIODE 1SS133T-77	
D711	8-719-302-43	DIODE EL1Z	
D714	8-719-991-33	DIODE 1SS133T-77	
D715	8-719-991-33	DIODE 1SS133T-77	
D716	8-719-991-33	DIODE 1SS133T-77	
D717	8-719-991-33	DIODE 1SS133T-77	
D718	8-719-991-33	DIODE 1SS133T-77	
D719	8-719-991-33	DIODE 1SS133T-77	
D720	8-719-991-33	DIODE 1SS133T-77	

< CRT SOCKET >

J701 ⚠	1-526-990-22	SOCKET, CRT

< COIL >

L704	1-408-609-41	INDUCTOR	33UH

< TRANSISTOR >

Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q703	8-729-906-70	TRANSISTOR BF871-127
Q704	8-729-200-17	TRANSISTOR 2SA1091-O
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q706	8-729-906-70	TRANSISTOR BF871-127
Q707	8-729-200-17	TRANSISTOR 2SA1091-O
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q709	8-729-906-70	TRANSISTOR BF871-127
Q710	8-729-200-17	TRANSISTOR 2SA1091-O
Q711	8-729-173-38	TRANSISTOR 2SA733-K

< RESISTOR >

R704	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R705	1-260-103-11	CARBON	2.2K	5%	1/2W	
R706	1-247-815-91	CARBON	220	5%	1/4W	
R707	1-249-408-11	CARBON	180	5%	1/4W	
R709	1-202-844-00	SOLID	330K	10%	1/2W	
R711	1-249-423-11	CARBON	3.3K	5%	1/4W	
R712	1-260-103-11	CARBON	2.2K	5%	1/2W	
R714	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	
R716	1-247-815-91	CARBON	220	5%	1/4W	
R717	1-249-408-11	CARBON	180	5%	1/4W	
R718	1-202-814-11	SOLID	33K	10%	1/2W	
R720	1-249-423-11	CARBON	3.3K	5%	1/4W	
R722	1-202-848-00	SOLID	680K	10%	1/2W	
R723	1-249-417-11	CARBON	1K	5%	1/4W	
R724	1-202-846-00	SOLID	470K	10%	1/2W	
R726	1-260-103-11	CARBON	2.2K	5%	1/2W	
R727	1-247-815-91	CARBON	220	5%	1/4W	
R728	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R729	1-249-408-11	CARBON	180	5%	1/4W	
R731	1-249-423-11	CARBON	3.3K	5%	1/4W	
R733	1-249-415-11	CARBON	680	5%	1/4W	
R734	1-247-807-31	CARBON	100	5%	1/4W	
R735	1-249-415-11	CARBON	680	5%	1/4W	

C **D2** **D**

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REF.NO.	PART NO.	DESCRIPTION	REMARK
R736	1-216-486-00	METAL OXIDE 8.2K 5% 3W	F
R739	1-249-417-11	CARBON 1K 5% 1/4W	
R740	1-249-415-11	CARBON 680 5% 1/4W	
R741	1-202-549-00	SOLID 100 20% 1/2W	
R744	1-249-421-11	CARBON 2.2K 5% 1/4W	
R745	1-249-421-11	CARBON 2.2K 5% 1/4W	
R746	1-249-421-11	CARBON 2.2K 5% 1/4W	
R747	1-249-437-11	CARBON 47K 5% 1/4W	
R748	1-249-417-11	CARBON 1K 5% 1/4W	
R749	1-249-435-11	CARBON 33K 5% 1/4W	

< VARIABLE RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M	

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*A-1640-214-A D2 BOARD, COMPLETE
****

< CAPACITOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1801	1-126-967-11	ELECT 47MF 20% 50V	
C1803	1-137-368-11	FILM 0.0047MF 5% 50V	
C1804	1-126-964-11	ELECT 10MF 20% 50V	
C1807	1-137-366-11	FILM 0.0022MF 5% 50V	

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN1801	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P	
CN1803	*1-568-878-51	PIN, CONNECTOR 3P	

< DIODE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1802	8-719-110-17	DIODE RD10ESB2	

< IC >

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1801	8-759-701-59	IC MCT7809CT	
IC1802	8-759-603-37	IC M5216P	

< IC LINK >

REF.NO.	PART NO.	DESCRIPTION	REMARK
JW1802 ⚠	1-532-605-91	LINK, IC 0.4A (ICP-F10)	

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1807	1-247-883-00	CARBON 150K 5% 1/4W	
R1809	1-249-429-11	CARBON 10K 5% 1/4W	
R1810	1-249-429-11	CARBON 10K 5% 1/4W	
R1811	1-249-429-11	CARBON 10K 5% 1/4W	
R1812	1-249-429-11	CARBON 10K 5% 1/4W	

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*A-1642-165-A D BOARD, COMPLETE
****

4-201-023-01 SPACER, INSULATING
4-202-373-01 SPRING, IC

< CAPACITOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
C502	1-102-824-00	CERAMIC 470PF 5% 50V	
C503	1-136-165-00	FILM 0.1MF 5% 50V	
C504	1-102-824-00	CERAMIC 470PF 5% 50V	
C506	1-126-941-11	ELECT 470MF 20% 25V	
C507	1-109-953-11	ELECT 2.2MF 20% 50V	
C509	1-136-165-00	FILM 0.1MF 5% 50V	
C510	1-126-969-11	ELECT 220MF 20% 50V	
C511	1-136-202-11	FILM 0.33MF 5% 63V	
C513	1-106-220-00	MYLAR 0.1MF 10% 100V	
C514	1-136-165-00	FILM 0.1MF 5% 50V	
C515	1-126-941-11	ELECT 470MF 20% 25V	
C517	1-126-941-11	ELECT 470MF 20% 25V	
C518	1-102-228-00	CERAMIC 470PF 10% 500V	
C519	1-102-228-00	CERAMIC 470PF 10% 500V	
C520	1-126-941-11	ELECT 470MF 20% 25V	
C521	1-124-006-11	ELECT 10MF 20% 25V	
C522	1-126-964-11	ELECT 10MF 20% 50V	
C523	1-136-165-00	FILM 0.1MF 5% 50V	
C600 ⚠	1-113-890-51	ELECT 0.0022MF 20% 250V	
C601 ⚠	1-161-964-91	CERAMIC 0.0047MF 250V	
C602 ⚠	1-161-964-91	CERAMIC 0.0047MF 250V	
C603	1-125-555-11	ELECT 330MF 20% 400V	
C604	1-126-968-11	ELECT 100MF 20% 50V	
C605	1-107-929-11	ELECT 10MF 20% 100V	
C606	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C607	1-104-666-11	ELECT 220MF 20% 25V	
C608	1-109-880-11	FILM 0.0015MF 3% 2KV	
C611	1-102-228-00	CERAMIC 470PF 10% 500V	
C612	1-111-160-11	ELECT 22MF 20% 100V	
C613	1-124-347-00	ELECT 100MF 20% 160V	
C614	1-128-526-11	ELECT 100MF 20% 25V	
C615	1-111-067-11	ELECT 0.001F 20% 25V	
C616	1-111-067-11	ELECT 0.001F 20% 25V	
C617	1-128-339-11	ELECT 2200MF 20% 16V	
C618	1-136-165-00	FILM 0.1MF 5% 50V	
C619	1-102-228-00	CERAMIC 470PF 10% 500V	
C620	1-102-228-00	CERAMIC 470PF 10% 500V	
C621	1-136-165-00	FILM 0.1MF 5% 50V	
C622	1-104-797-11	ELECT 0.47MF 20% 100V	
C623	1-104-666-11	ELECT 220MF 20% 25V	
C624	1-136-165-00	FILM 0.1MF 5% 50V	
C625	1-126-967-11	ELECT 47MF 20% 50V	
C626	1-104-666-11	ELECT 220MF 20% 25V	
C628	1-126-964-11	ELECT 10MF 20% 50V	
C629	1-111-097-11	ELECT 0.0022F 20% 35V	
C630	1-111-097-11	ELECT 0.0022F 20% 35V	
C631	1-126-965-11	ELECT 22MF 20% 50V	
C632	1-104-666-11	ELECT 220MF 20% 25V	
C633 ⚠	1-107-564-11	FILM 0.22MF 20% 300V	
C634 ⚠	1-107-564-11	FILM 0.22MF 20% 300V	
C635 ⚠	1-107-564-11	FILM 0.22MF 20% 300V	
C636 ⚠	1-113-890-51	ELECT 0.0022MF 20% 250V	
C640	1-106-220-00	MYLAR 0.1MF 10% 100V	
C647	1-162-116-00	CERAMIC 680PF 10% 2KV	
C651	1-102-228-00	CERAMIC 470PF 10% 500V	
C800	1-137-368-11	FILM 0.0047MF 5% 50V	
C801	1-137-372-11	FILM 0.022MF 5% 50V	
C802	1-136-153-00	FILM 0.01MF 5% 50V	
C804	1-136-165-00	FILM 0.1MF 5% 50V	
C805	1-136-207-11	FILM 0.047MF 10% 250V	
C806	1-104-999-11	MYLAR 0.1MF 10% 200V	
C807	1-136-109-00	FILM 0.68MF 5% 200V	
C808	1-137-205-11	FILM 0.1MF 5% 400V	
C810	1-107-683-11	ELECT 2.2MF 0 250V	
C811	1-102-212-00	CERAMIC 820PF 10% 500V	

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Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C812	1-136-125-00	FILM	0.68MF	5%	400V
C813	1-129-722-00	FILM	0.047MF	10%	630V
C814	1-136-565-11	FILM	0.015MF	3%	1.4KV
C815	1-136-562-11	MYLAR	0.0082MF	10%	400V
C816	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C817	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C818	1-162-134-11	CERAMIC	470PF	10%	2KV
C819	1-136-208-11	FILM	0.068MF	10%	250V
C820	1-102-114-00	CERAMIC	470PF	10%	50V
C821	1-162-114-00	CERAMIC	0.0047MF		2KV
C822	1-107-662-11	ELECT	22MF	20%	250V
C824	1-123-024-21	ELECT	33MF		160V
C829	1-124-902-00	ELECT	0.47MF	20%	50V
C830	1-124-902-00	ELECT	0.47MF	20%	50V
C832	1-124-903-11	ELECT	1MF	20%	50V
C834	1-128-551-11	ELECT	22MF	20%	25V
C835	1-162-318-11	CERAMIC	0.001MF	10%	500V
C836	1-162-117-00	CERAMIC	100PF	10%	500V
C838	1-102-228-00	CERAMIC	470PF	10%	500V
C839	1-136-189-00	FILM	0.1MF	10%	250V
C845	1-102-110-00	CERAMIC	220PF	10%	50V
C901	1-101-810-00	CERAMIC	100PF	5%	500V
C902	1-137-372-11	FILM	0.022MF	5%	50V
C903	1-137-372-11	FILM	0.022MF	5%	50V
C904	1-104-665-11	ELECT	100MF	20%	25V
C905	1-126-964-11	ELECT	10MF	20%	50V
C906	1-126-964-11	ELECT	10MF	20%	50V
C907	1-126-964-11	ELECT	10MF	20%	50V
C908	1-126-964-11	ELECT	10MF	20%	50V
C911	1-126-964-11	ELECT	10MF	20%	50V
C913	1-101-810-00	CERAMIC	100PF	5%	500V
C1200	1-136-165-00	FILM	0.1MF	5%	50V
C1201	1-136-173-00	FILM	0.47MF	5%	50V
C1202	1-136-173-00	FILM	0.47MF	5%	50V
C1203	1-136-169-00	FILM	0.22MF	5%	50V
C1204	1-136-169-00	FILM	0.22MF	5%	50V
C1205	1-101-005-00	CERAMIC	0.022MF		50V
C1206	1-101-005-00	CERAMIC	0.022MF		50V
C1207	1-126-933-11	ELECT	100MF	20%	16V
C1208	1-126-963-11	ELECT	4.7MF	20%	50V
C1209	1-126-963-11	ELECT	4.7MF	20%	50V
C1214	1-126-933-11	ELECT	100MF	20%	16V
C1215	1-136-173-00	FILM	0.47MF	5%	50V
C1216	1-137-366-11	FILM	0.0022MF	5%	50V
C1217	1-137-366-11	FILM	0.0022MF	5%	50V
C1218	1-126-934-11	ELECT	220MF	20%	16V

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN600 ⚠	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN601 ⚠	1-508-765-11	PIN, CONNECTOR (5MM PITCH) 3P	
CN603 ⚠	*1-580-844-11	PIN, CONNECTOR (POWER)	
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P	
CN801	*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P	
CN803	1-695-915-11	TAB (CONTACT)	
CN804	1-778-037-11	PIN, CONNECTOR 6P	
CN807	1-568-878-51	PIN, CONNECTOR 3P	
CN900	1-568-678-11	TERMINAL BLOCK, S 3P	
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN1401	*1-568-880-51	PIN, CONNECTOR 5P	
CN1408	*1-568-879-11	PIN, CONNECTOR 4P	
CN1420	*1-568-878-51	PIN, CONNECTOR 3P	

< DIODE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
D500	8-719-109-85	DIODE RD5.1ES-B2	
D502	8-719-979-85	DIODE EGP20G	
D503	8-719-979-85	DIODE EGP20G	
D504	8-719-991-33	DIODE 1SS133T-77	
D505	8-719-982-03	DIODE MTZJ-3.6A	
D506	8-719-991-33	DIODE 1SS133T-77	
D507	8-719-109-85	DIODE RD5.1ES-B2	
D600	8-719-510-53	DIODE D4SB60L	
D601	8-719-046-77	DIODE EM1-V1	
D603	8-719-109-97	DIODE RD6.8ES-B2	
D604	8-719-046-75	DIODE EU-1-V1	
D605	8-719-302-43	DIODE EL1Z	
D606	8-719-302-43	DIODE EL1Z	
D607	8-719-046-78	DIODE EG-1Z-V1	
D608	8-719-312-94	DIODE EU2-V1	
D609	8-719-301-64	DIODE RU4DS	
D610	8-719-046-74	DIODE AU-01Z-V1	
D611	8-719-045-48	DIODE FML-G12S	
D612	8-719-046-76	DIODE RU-3YX-V1	
D613	8-719-045-48	DIODE FML-G12S	
D614	8-719-045-48	DIODE FML-G12S	
D615	8-719-046-75	DIODE EU-1-V1	
D616	8-719-110-03	DIODE RD7.5ESB2	
D617	8-719-991-33	DIODE 1SS133T-77	
D618	8-719-991-33	DIODE 1SS133T-77	
D619	8-719-991-33	DIODE 1SS133T-77	
D620	8-719-991-33	DIODE 1SS133T-77	
D622	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D625	8-719-991-33	DIODE 1SS133T-77	
D626	8-719-046-74	DIODE AU-01Z-V1	
D631	8-719-109-93	DIODE RD6.2ES-B2	
D800	8-719-991-33	DIODE 1SS133T-77	
D801	8-719-991-33	DIODE 1SS133T-77	
D802	8-719-991-33	DIODE 1SS133T-77	
D803	8-719-908-03	DIODE GP08D	
D807	8-719-302-43	DIODE EL1Z	
D808	8-719-908-03	DIODE GP08D	
D809	8-719-018-82	DIODE RGP02-20EL-6394	
D810	8-719-302-43	DIODE EL1Z	
D812	8-719-038-49	DIODE FMS-3FU-LF027-1	
D815	8-719-908-03	DIODE GP08D	
D817	8-719-109-89	DIODE RD5.6ESB2	
D901	8-719-030-11	DIODE SLA-570KT3F	
	*4-203-258-01	HOLDER, LED	
D902	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D903	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D904	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D905	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D906	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D1201	8-719-109-72	DIODE RD3.9ES-B2	

< FUSE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
F601 ⚠	1-576-232-21	FUSE (H.B.C.) 5.0A/250V	
⚠	1-533-230-12	HOLDER, FUSE :F601	

< FERRITE BEAD >

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	

D

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REF.NO.	PART NO.	DESCRIPTION	REMARK
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB800	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
		< IC >	
IC500	8-759-192-71	IC STV9379	
IC600	8-749-010-84	IC STR-S6708	
IC601 ⚠	8-749-924-92	IC TLP721(D4-)	
IC602	8-749-920-61	IC SE-135N	
IC603	8-759-144-82	IC µPC2405HF	
IC604	8-759-366-13	IC L4941BV	
IC606	8-759-267-25	IC LM2940T-9.0	
IC800	8-759-103-93	IC µPC393P	
IC900	8-747-905-11	RAY CATCHER ELEMENT SBX1790-51	
IC1200	8-759-250-68	IC TDA7264	
IC1201	8-759-502-21	IC TDA2822M	
		< JACK >	
J900	1-764-606-11	JACK	
		< COIL >	
L502	1-412-519-11	INDUCTOR 3.3UH	
L503	1-412-519-11	INDUCTOR 3.3UH	
L609	1-412-533-21	INDUCTOR 47UH	
L611	1-412-527-11	INDUCTOR 15UH	
L612	1-412-522-41	INDUCTOR 5.6UH	
L613	1-412-522-41	INDUCTOR 5.6UH	
L615	1-412-529-11	INDUCTOR 22UH	
L616	1-412-533-21	INDUCTOR 47UH	
L801	1-459-111-00	COIL, DRAM CORE (CDI)	
L802	1-459-104-00	COIL, WITH CORE	
L803	1-420-872-00	COIL, AIR CORE	
L804	1-406-903-11	COIL, HORIZONTAL LINEARITY	
L805	1-406-675-11	COIL, CHOKE 4.7MMH	
L809	1-412-533-21	INDUCTOR 47UH	
L811	1-406-979-11	COIL, CHOKE 220UH	
L813	1-412-552-11	INDUCTOR 2.2MMH	
L901	1-408-603-31	INDUCTOR 10UH	
L902	1-408-603-31	INDUCTOR 10UH	
L903	1-408-409-00	INDUCTOR 10UH	
L904	1-408-409-00	INDUCTOR 10UH	
		< IC LINK >	
PS600 ⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS601 ⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS602 ⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS603 ⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
		< TRANSISTOR >	
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q503	8-729-900-89	TRANSISTOR DTC144ES	
Q601	8-729-025-04	TRANSISTOR 2SC3852A	
Q602	8-729-320-28	TRANSISTOR 2SA1667	
Q603	8-729-802-78	TRANSISTOR 2SC3502-E	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606	8-729-900-65	TRANSISTOR DTA144ES	
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q800	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-017-06	TRANSISTOR 2SC4793	
Q802	8-729-016-32	TRANSISTOR 2SC4927-01	
Q803	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q805	8-729-900-89	TRANSISTOR DTC144ES	
Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1200	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1201	8-729-900-74	TRANSISTOR DTC143TS	
Q1202	8-729-900-80	TRANSISTOR DTC114ES	
Q1203	8-729-900-74	TRANSISTOR DTC143TS	
Q1204	8-729-900-74	TRANSISTOR DTC143TS	
		< RESISTOR >	
R500	1-215-457-00	METAL 33K 1% 1/4W	
R502	1-249-421-11	CARBON 2.2K 5% 1/4W	
R503	1-249-429-11	CARBON 10K 5% 1/4W	
R504	1-215-455-00	METAL 27K 1% 1/4W	
R505	1-249-382-11	CARBON 1.2 5% 1/4W	F
R506	1-215-439-00	METAL 5.6K 1% 1/4W	
R507	1-215-888-00	METAL OXIDE 220 5% 2W	F
R508	1-216-371-00	METAL OXIDE 1.5 5% 2W	F
R509	1-249-443-11	CARBON 0.47 5% 1/4W	F
R510	1-249-443-11	CARBON 0.47 5% 1/4W	F
R520	1-215-457-00	METAL 33K 1% 1/4W	
R521	1-215-455-00	METAL 27K 1% 1/4W	
R522	1-247-863-91	CARBON 22K 5% 1/4W	
R523	1-247-863-91	CARBON 22K 5% 1/4W	
R524	1-249-425-11	CARBON 4.7K 5% 1/4W	
R525	1-249-425-11	CARBON 4.7K 5% 1/4W	
R526	1-249-421-11	CARBON 2.2K 5% 1/4W	
R527	1-215-437-00	METAL 4.7K 1% 1/4W	
R600	1-216-490-11	METAL OXIDE 39K 5% 3W	F
R601	1-249-417-11	CARBON 1K 5% 1/4W	
R602	1-215-473-00	METAL 150K 1% 1/4W	
R603	1-215-898-11	METAL OXIDE 10K 5% 2W	F
R604	1-249-420-11	CARBON 1.8K 5% 1/4W	
R605	1-216-362-11	METAL OXIDE 0.27 5% 2W	F
R607	1-216-421-11	METAL OXIDE 12 5% 1W	F
R608	1-216-365-00	METAL OXIDE 0.47 5% 2W	F
R610	1-215-421-00	METAL 1K 1% 1/4W	
R611	1-216-354-11	METAL OXIDE 2.7 5% 1W	F
R612	1-249-428-11	CARBON 8.2K 5% 1/4W	
R613	1-249-417-11	CARBON 1K 5% 1/4W	
R614	1-215-877-11	METAL OXIDE 22K 5% 1W	F
R615	1-249-435-11	CARBON 33K 5% 1/4W	
R616	1-215-471-00	METAL 120K 1% 1/4W	
R617	1-215-901-00	METAL OXIDE 33K 5% 2W	F
R618	1-247-863-91	CARBON 22K 5% 1/4W	
R619	1-216-425-11	METAL OXIDE 56 5% 1W	F
R620	1-260-131-11	CARBON 470K 5% 1/2W	
R621	1-216-425-11	METAL OXIDE 56 5% 1W	F
R622	1-249-437-11	CARBON 47K 5% 1/4W	
R623	1-249-429-11	CARBON 10K 5% 1/4W	
R624	1-249-393-11	CARBON 10 5% 1/4W	F
R625	1-249-434-11	CARBON 27K 5% 1/4W	
R626	1-249-430-11	CARBON 12K 5% 1/4W	

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REF.NO.		PART NO.	DESCRIPTION				REMARK
R627		1-216-347-11	METAL OXIDE	0.68	5%	1W	F
R628		1-249-415-11	CARBON	680	5%	1/4W	F
R629	⚠	1-244-945-91	CARBON	1M	5%	1/2W	
R630	⚠	1-218-265-21	METAL	8.2M	5%	1W	
R631	⚠	1-205-949-11	WIREWOUND	1.8	5%	10W	
R632		1-247-807-31	CARBON	100	5%	1/4W	
R633		1-247-807-31	CARBON	100	5%	1/4W	
R634		1-249-397-11	CARBON	22	5%	1/4W	F
R635		1-249-437-11	CARBON	47K	5%	1/4W	
R636		1-249-417-11	CARBON	1K	5%	1/4W	
R637		1-247-815-91	CARBON	220	5%	1/4W	
R638		1-247-863-91	CARBON	22K	5%	1/4W	
R639		1-215-439-00	METAL	5.6K	1%	1/4W	
R642	⚠	1-205-949-11	WIREWOUND	1.8	5%	10W	
R645		1-249-422-11	CARBON	2.7K	5%	1/4W	
R646		1-249-377-11	CARBON	0.47	5%	1/4W	F
R647		1-202-933-61	FUSIBLE	0.1	10%	1/2W	F
R800		1-249-421-11	CARBON	2.2K	5%	1/4W	
R802		1-247-863-91	CARBON	22K	5%	1/4W	
R803		1-249-424-11	CARBON	3.9K	5%	1/4W	
R805		1-249-429-11	CARBON	10K	5%	1/4W	
R809		1-249-441-11	CARBON	100K	5%	1/4W	
R812		1-249-421-11	CARBON	2.2K	5%	1/4W	
R813		1-215-867-00	METAL OXIDE	470	5%	1W	F
R814		1-249-411-11	CARBON	330	5%	1/4W	
R816		1-215-917-11	METAL OXIDE	1K	5%	3W	F
R817		1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R818		1-215-882-00	METAL OXIDE	22	5%	2W	F
R819		1-216-345-11	METAL OXIDE	0.47	5%	1W	F
R820		1-249-403-11	CARBON	68	5%	1/4W	
R821		1-215-909-11	METAL OXIDE	47	5%	3W	F
R822		1-215-868-00	METAL OXIDE	680	5%	1W	F
R824		1-249-420-11	CARBON	1.8K	5%	1/4W	
R826		1-247-752-11	CARBON	1K	5%	1/2W	
R827		1-249-425-11	CARBON	4.7K	5%	1/4W	
R828		1-249-430-11	CARBON	12K	5%	1/4W	
R829		1-249-493-11	CARBON	56K	5%	1/2W	
R830		1-217-778-11	FUSIBLE	1K	5%	1W	F
R833		1-247-887-00	CARBON	220K	5%	1/4W	
R835		1-216-471-11	METAL OXIDE	27	5%	3W	F
R836		1-249-439-11	CARBON	68K	5%	1/4W	
R837		1-249-427-11	CARBON	6.8K	5%	1/4W	
R840		1-247-807-31	CARBON	100	5%	1/4W	
R841		1-249-418-11	CARBON	1.2K	5%	1/4W	
R842		1-249-425-11	CARBON	4.7K	5%	1/4W	
R843		1-249-441-11	CARBON	100K	5%	1/4W	
R846		1-247-885-00	CARBON	180K	5%	1/4W	
R847		1-247-895-91	CARBON	470K	5%	1/4W	
R848		1-247-863-91	CARBON	22K	5%	1/4W	
R849		1-249-429-11	CARBON	10K	5%	1/4W	
R850		1-249-425-11	CARBON	4.7K	5%	1/4W	
R851		1-215-898-11	METAL OXIDE	10K	5%	2W	F
R852		1-249-432-11	CARBON	18K	5%	1/4W	
R900		1-247-815-91	CARBON	220	5%	1/4W	
R901		1-247-734-11	CARBON	39	5%	1/2W	
R902		1-247-734-11	CARBON	39	5%	1/2W	
R904		1-249-389-11	CARBON	4.7	5%	1/4W	F
R905		1-247-804-11	CARBON	75	5%	1/4W	
R906		1-247-804-11	CARBON	75	5%	1/4W	
R907		1-247-804-11	CARBON	75	5%	1/4W	

REF.NO.		PART NO.	DESCRIPTION				REMARK
R908		1-249-401-11	CARBON	47	5%	1/4W	
R909		1-249-429-11	CARBON	10K	5%	1/4W	
R910		1-249-422-11	CARBON	2.7K	5%	1/4W	
R911		1-249-426-11	CARBON	5.6K	5%	1/4W	
R912		1-249-429-11	CARBON	10K	5%	1/4W	
R913		1-247-863-91	CARBON	22K	5%	1/4W	
R914		1-249-437-11	CARBON	47K	5%	1/4W	
R919		1-249-437-11	CARBON	47K	5%	1/4W	
R921		1-249-437-11	CARBON	47K	5%	1/4W	
R922		1-247-807-31	CARBON	100	5%	1/4W	
R923		1-249-412-11	CARBON	390	5%	1/4W	
R1200		1-249-425-11	CARBON	4.7K	5%	1/4W	
R1201		1-249-434-11	CARBON	27K	5%	1/4W	
R1202		1-249-389-11	CARBON	4.7	5%	1/4W	F
R1203		1-249-421-11	CARBON	2.2K	5%	1/4W	
R1204		1-249-421-11	CARBON	2.2K	5%	1/4W	
R1205		1-249-428-11	CARBON	8.2K	5%	1/4W	
R1206		1-249-428-11	CARBON	8.2K	5%	1/4W	
R1208		1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1209		1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1211		1-249-424-11	CARBON	3.9K	5%	1/4W	
R1212		1-249-424-11	CARBON	3.9K	5%	1/4W	
R1213		1-249-421-11	CARBON	2.2K	5%	1/4W	
R1216		1-249-413-11	CARBON	470	5%	1/4W	
R1217		1-249-425-11	CARBON	4.7K	5%	1/4W	

< RELAY >

RY600	⚠	1-755-018-11	RELAY

< SWITCH >

S601	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)
S900		1-692-979-11	SWITCH, TACTILE
S901		1-692-979-11	SWITCH, TACTILE
S902		1-692-979-11	SWITCH, TACTILE

< SPARK GAP >

SG801	1-519-422-11	GAP, SPARK

< TRANSFORMER >

LF600	⚠	1-421-776-11	LFT
LF601	⚠	1-421-776-11	LFT
T601	⚠	1-429-605-11	TRANSFORMER, CONVERTER
T800		1-424-545-11	TRANSFORMER, FERRITE (PMT)
T803	⚠	1-453-169-11	TRANSFORMER ASSY, FLYBACK (UX-1604A2)
T804		1-437-090-31	HDT

< THERMISTOR >

THP600	⚠	1-809-827-11	THERMISTOR, POSITIVE

****

*A-1644-070-A VM BOARD, COMPLETE
****

*4-368-683-11 SPRING, TRANSISTOR
*4-368-683-21 SPRING, TRANSISTOR

< CAPACITOR >

C1701	1-126-933-11	ELECT	100MF	20%	16V
C1702	1-128-551-11	ELECT	22MF	20%	25V

VM

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REF.NO.	PART NO.	DESCRIPTION				REMARK
C1703	1-126-933-11	ELECT	100MF	20%	16V	
C1704	1-107-357-11	FILM	0.47MF	5%	100V	
C1705	1-107-638-11	ELECT	33MF	20%	160V	
C1706	1-104-999-11	FILM	0.1MF	5%	200V	
C1707	1-137-397-11	FILM	0.047MF	5%	100V	
C1708	1-137-364-11	FILM	0.001MF	5%	50V	
C1709	1-137-364-11	FILM	0.001MF	5%	50V	
C1710	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1720	1-107-667-11	ELECT	2.2MF	20%	160V	
C1721	1-137-397-11	FILM	0.047MF	5%	100V	
C1722	1-126-934-11	ELECT	220MF	20%	16V	
C1723	1-161-830-00	CERAMIC	0.0047MF		500V	
C1725	1-128-551-11	ELECT	22MF	20%	25V	
C1726	1-126-934-11	ELECT	220MF	20%	16V	

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION
CN1015	*1-568-880-51	PIN, CONNECTOR 5P
CN1718	1-774-418-11	CONNECTOR, BOARD TO BOARD 8P

< DIODE >

REF.NO.	PART NO.	DESCRIPTION
D1701	8-719-991-33	DIODE 1SS133T-77
D1702	8-719-110-88	DIODE RD39ES-B2
D1703	8-719-110-88	DIODE RD39ES-B2

< COIL >

REF.NO.	PART NO.	DESCRIPTION	
L1701	1-408-409-00	INDUCTOR	10UH
L1702	1-408-403-00	INDUCTOR	3.3UH
L1703	1-408-409-00	INDUCTOR	10UH
L1704	1-408-418-00	INDUCTOR	56UH
L1705	1-408-418-00	INDUCTOR	56UH

< TRANSISTOR >

REF.NO.	PART NO.	DESCRIPTION
Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1702	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1703	8-729-017-05	TRANSISTOR 2SA1837
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1706	8-729-017-06	TRANSISTOR 2SC4793
Q1708	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1709	8-729-119-78	TRANSISTOR 2SC2785-HFE

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1701	1-249-417-11	CARBON	1K	5%	1/4W	
R1702	1-249-417-11	CARBON	1K	5%	1/4W	
R1703	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1704	1-249-415-11	CARBON	680	5%	1/4W	
R1705	1-247-815-91	CARBON	220	5%	1/4W	
R1706	1-247-815-91	CARBON	220	5%	1/4W	
R1708	1-249-412-11	CARBON	390	5%	1/4W	
R1712	1-260-311-11	CARBON	39	5%	1/2W	
R1713	1-249-384-11	CARBON	1.8	5%	1/4W	F
R1714	1-249-414-11	CARBON	560	5%	1/4W	F
R1715	1-249-432-11	CARBON	18K	5%	1/4W	
R1716	1-249-417-11	CARBON	1K	5%	1/4W	F
R1717	1-216-476-11	METAL OXIDE	180	5%	3W	F
R1718	1-249-432-11	CARBON	18K	5%	1/4W	
R1719	1-249-384-11	CARBON	1.8	5%	1/4W	F
R1720	1-249-400-11	CARBON	39	5%	1/4W	F
R1721	1-249-414-11	CARBON	560	5%	1/4W	
R1722	1-249-401-11	CARBON	47	5%	1/4W	
R1724	1-249-400-11	CARBON	39	5%	1/4W	
R1725	1-216-451-11	METAL OXIDE	120	5%	2W	F
R1728	1-249-413-11	CARBON	470	5%	1/4W	
R1729	1-249-413-11	CARBON	470	5%	1/4W	
R1730	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1731	1-249-411-11	CARBON	330	5%	1/4W	

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MISCELLANEOUS
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REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠ 1-406-807-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	⚠ 1-453-169-11	TRANSFORMER ASSY, FLYBACK(NX-1604A2)	
	1-544-727-11	SPEAKER (7.5x13CM)	
	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
	1-693-338-11	TUNER/VIF (AEP) (KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R)	
	1-693-340-11	TUNER/VIF (FR) (KV-29X1B)	
	1-693-339-11	TUNER/VIF (UK) (KV-29X1U)	
	⚠ 1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-29X1A/29X1B/29X1D/29X1E)	
	⚠ 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-29X1K/29X1R)	
	⚠ 1-776-204-11	CORD, POWER (FILTER) 3A/250V (KV-29X1L/29X1U)	
	⚠ 8-451-467-12	DEFLECTION YOKE (Y29GXA2B)	
	⚠ 8-453-005-11	NECK ASSY, PICTURE TUBE (NA-297-M)	
V901	⚠ 8-733-856-05	PICTURE TUBE (SD-269)(M68LCT60X)	
	⚠ 8-733-856-71	ITC	

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ACCESSORIES AND PACKING MATERIALS
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PART NO.	DESCRIPTION
*4-042-128-01	INDIVIDUAL CARTON
*4-042-127-01	CUSHION (LOWER) (ASSY)
*4-042-126-01	CUSHION (UPPER) (ASSY)
4-203-366-41	MANUAL, INSTRUCTION (KV-29X1A)(ITALIAN)
4-203-366-51	MANUAL, INSTRUCTION (KV-29X1B) (FRENCH/GERMAN/ITALIAN/DUTCH)
4-203-366-11	MANUAL, INSTRUCTION (KV-29X1D) (DUTCH/GREEK/ENGLISH/GERMAN/TURKISH)
4-203-372-11	MANUAL, INSTRUCTION (KV-29X1D) (ENGLISH/DUTCH)
4-203-366-71	MANUAL, INSTRUCTION (KV-29X1E)(SPANISH)
4-203-366-81	MANUAL, INSTRUCTION (KV-29X1E) (PORTUGUESE/FINNISH/DANISH/NORWEGIAN/ SWEDISH)
4-203-366-91	MANUAL, INSTRUCTION (KV-29X1K/29X1R) (CZECH/ENGLISH/POLISH/BULGARIAN/ RUSSIAN)
4-203-366-61	MANUAL, INSTRUCTION (KV-29X1L/29X1U) (ENGLISH)
*4-395-957-01	BAG, PROTECTION

REMOTE COMMANDER
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PART NO.	DESCRIPTION
1-473-693-11	COMMANDER, STANDARD TYPE (RM-839)

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